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ONE SHILLING.

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AFTER THE STREET FIGHTING IN BERLIN : CIVIC GUARDS AT THE FOOT OF THE BISMARCK MONUMENT—TAKING A MEAL.

As we note under a double-page photograph in this number, there was considerable trouble in Berlin on the occasion of a demonstration by the Communists and the Socialists in connection with the Industrial Councils Bill. The Civic Guard came into action

against the unruly elements in the great crowd, and, according to the German official report, the number of killed before the Reichstag building was twenty-two. Two men of the Civic Guard were killed. The Bismarck Monument is opposite the Reichstag.



By HILAIRE BELLOC

LANDSCAPE and all that goes with it—the physical impression of a place—is (some say) next in importance to the knowledge of men, if one is to understand the world. Perhaps it might even be put before the knowledge of men. For the knowledge of men is a doubtful thing, hidden and uncertain; but landscape, the physical world, is to be appreciated by all. And it moulds the men one has to appreciate, and, in some way also which I do not quite understand, it clothes and informs everything: human action and human thought and the mass of half-conscious and unconscious things lying behind them. Yet foreign landscape nobody gets in this day of print, when every man is discuss' foreign affairs!

One may say: "Neither did the mass of men get it before the habit of universal newspaper reading came in with the present generation." That is true. Indeed, the present generation has a sort of faint image (sometimes) of the places it talks about, where our ancestors had none, but merely reproduced (with their much healthier and simpler imaginations) the landscape of their own country in reading of another. To-day a man reading of Russia, let us say (even the least instructed man), hardly thinks of a Russian village as a place with a squire, a parson, farmers, labourers, a railway station, a daily newspaper, and metalled roads. Even the least instructed man vaguely pictures to himself something much rougher, in a flat, rather dreary country. Perhaps he sees it covered with snow. At any rate, he does not make it a mere copy of England. He would certainly be startled if he were to find himself in a Russian village. He would think the wooden houses were run up as shanties for a season, and he would wonder where the roads were, and the dress would startle him a little, and the absence of wealth still more. Still, he has some very vague picture of it in his mind.

But the increase of real information has not kept pace, nor anything like kept pace, with the increase of paper and ink in the matter. If you could put the thing numerically you might say that the habit of discussing with some confidence the foreign affairs of this country has multiplied by a thousand, while accuracy and vividness in visualising the foreign place discussed has multiplied by perhaps ten.

There is something worse than this, and that is, the strange certitude that goes with modern print and paper, a certitude not only in opinion, but in the pictures of the mind. If the reader of the newspaper knew that he knew very little indeed, if he appreciated how tenuous was his little ghost of a picture and how utterly imperfect, things would be better. But he does not. There is a sort of "elementary-school spirit" abroad which makes a man *certain* that he has not only the truth and the whole truth, but nothing but the truth whenever he states what he may have read in print. Pictures do a great deal, but they usually have no colour, and when they have colour it is usually false. They cannot have real sunlight in them, or the smell of a place (which is very important), and life is absent from them altogether. Which of us has ever seen a foreign place without recognising both the pictures of it and something quite new and vastly more important? Photography particularly accounts for this, with its false perspective and its inhuman register. But it is not only photography that is to blame: it is translation of any kind.

The two best men for rendering exactly in detail a foreign landscape to the English eye in our time were Brett and Lear. Yet, whenever I see with my own eyes for the first time something which I have already seen in their amazingly vivid and accurate work, I feel how entirely different it is from the translation, the pictures I had seen before I came.

It is curious to note in this connection how very little description of foreign countries there is which even attempts to give the atmosphere of them, and how small a proportion out of those attempts even approach success.



SETTING UP THE NURSE CAVELL MEMORIAL IN CHARING CROSS ROAD: PART OF THE FIGURE, WITH THE HEAD VEILED.—[Photograph by Newspaper Illustrations.]

A little more than seven years ago I was walking along the road which the Grand Army of Napoleon followed just before the Battle of Borodino in its approach to Moscow before the Great Retreat. I had timed my walk to coincide with the season of the original march, for one cannot write about a battle accurately without visiting the site, and visiting it, as far as possible, under the same climatic conditions as those under which it was fought. I remember wondering to myself as I went along that great broad rambling earth track (which is not a road, in our sense, at all) whether the defeat of Napoleon, which came entirely from his breakdown in Russia, were not due to a false visualisation of the conditions of the campaign: to a false picture of physical conditions, a false picture established in his mind before he began the march. The more I studied that campaign and the retreat, the more convinced I was that this was the explanation. It is all very well to have the most minute details provided for one on paper, to be told the climatic conditions in terms of the thermometer and the rainfall, and the rest of it; to have an estimate of the capacity of

communications and all that is necessary for preliminary staff work before undertaking an expedition into an unknown country. But there is, *in the place itself*, something more, which makes all the difference. That "something more" we all feel when we travel, if we travel at all intelligently; but it is impossible to define.

Instances of it crowd upon me. For example, the water of the Mediterranean. I did not handle a boat in the Mediterranean before my thirtieth year, and I found it an altogether different thing from handling a boat in the Channel, the North or Irish Seas, or a little bit of the Pacific, which were the only places in which, until then, I had sailed. Of course one could read in a book that the Mediterranean was slightly more salt than the Channel, and it was obvious that where its coasts were mountainous there would be gusts. There is also plenty of written stuff to tell you that "seas are usually steeper than in the Atlantic." But all that is not what I mean. There is a different "feel" in the boat. It behaves differently; it has a different soul. That is true not only of the one detail of sailing a small boat, it is true of all the actions of man in a new place.

The confirmation of that truth lies in the excellence of local custom. We have an example of this in the difference of local custom between one district and another, even in this one Island. Men from the North come down to the clay of the Weald (men who have had plenty to do with clay) and they try to show the men of the Weald the way in which they should farm. And those men of the North go bankrupt—or, as our lovely euphemism has it, "They are farmed out." The vineyard men of Burgundy cannot teach the vineyard men of the Garonne. A tree planted on the edges of the Camargue will die unless it is planted by a man from the edges of the Camargue. And I know a field close to my home which was most fertile until there came a wiseacre from not more than fifty miles away, who ploughed it an inch or so deeper than of old and ruined it forever. For he struck the shrave.

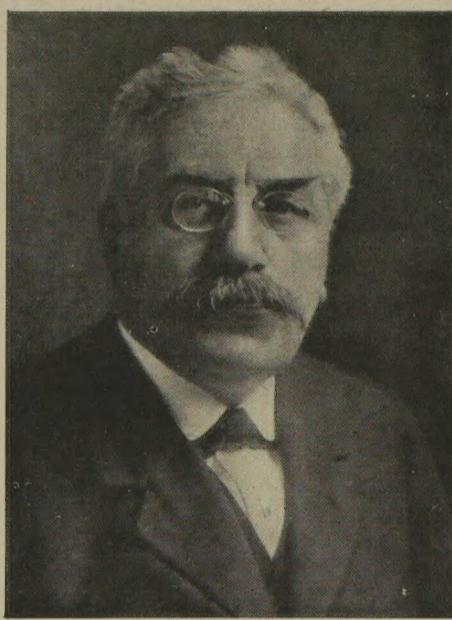
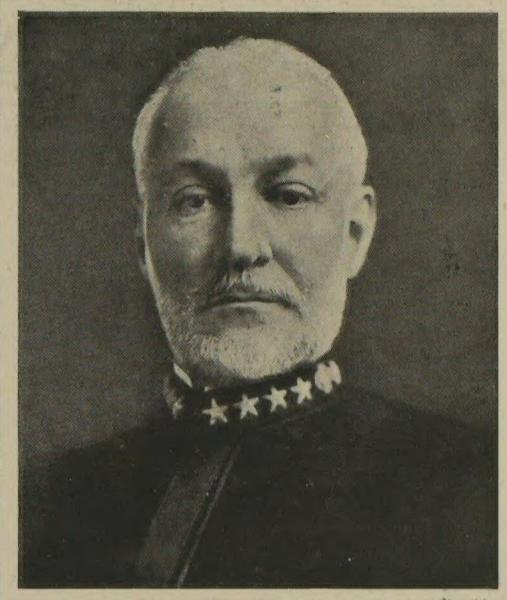
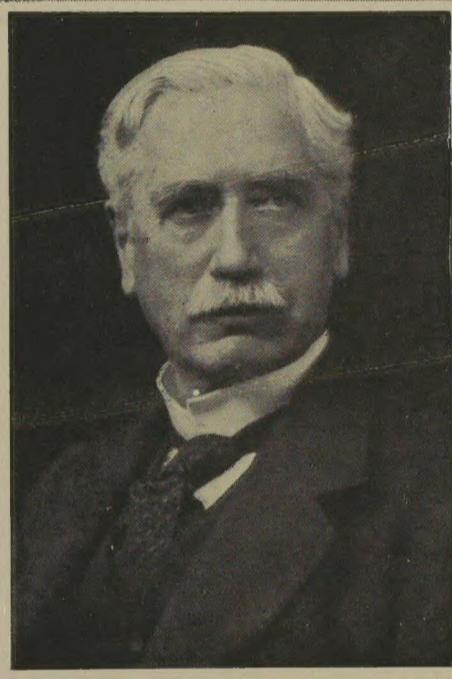
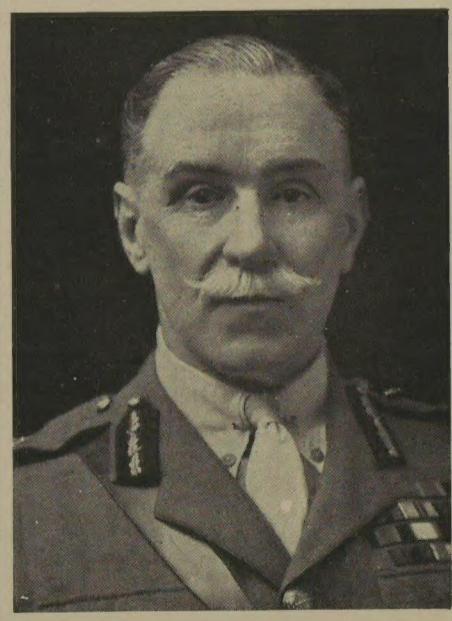
Since it is so necessary to have landscape, physical appearance, if one is to judge at all of men and their action, and since your modern town millions, reading their newspapers, cannot get anything of the sort, what is to be done?

How are you to prevent a politician from trying to apply the factory system of Bolton, for example, to a Kentish fruit farm (he is actually trying to do that to-day!). How are you to prevent what is called "public opinion" insisting upon a brisk summer campaign in Lat. 30 N., or getting impatient about the making of a track through a tropical forest, or perhaps annexing the swamps of the Amazon? How are you to prevent the necessities or frenzies of the Mississippi Valley in matters of food and drink from being quoted as examples to the peasants of Norfolk?

This question can only be answered (like nearly all modern questions) with the simple and unpleasing answer that there is no remedy. The thing must "dree its weird." It must work itself out by what is called "trial and error"—sharp trial and plenty of error, and disastrous error at that. When the trial is over and the errors have borne their fruit, you will be back again in a simpler civilisation—let us hope not wholly destroyed—and one in which the man who has seen and touched and handled and known is listened to and the man who has not is disregarded.

PROMINENT IN THE WORLD'S REBUILDING: MEN OF THE HOUR.

PHOTOGRAPHS BY TOPICAL, RUSSELL, C.N., AND ELLIOTT AND FRY.

THE NEW PREMIER OF FRANCE:
M. ALEXANDRE MILLERAND.RECENTLY CRITICISING THE U.S. NAVY
DEPARTMENT: ADMIRAL SIMS.SECRETARY TO THE U.S. NAVY DE-
PARTMENT: MR. JOSEPHUS DANIELS.BRITISH HIGH COMMISSIONER IN
RHINELAND: SIR HAROLD STUART.PRESIDENT OF THE ALLIED NAVAL COMMISSION IN
GERMANY: VICE-ADMIRAL SIR EDWARD CHARLTON.BRITISH HIGH COMMISSIONER AT
SOFIA: SIR HERBERT GUY DERING.TO COMMAND IN MESOPOTAMIA:
GENERAL SIR J. A. L. HALDANE.DIRECTOR OF FORTIFICATIONS AND WORKS: THE
LATE MAJOR-GENERAL SIR PHILIP G. TWINING.SECRETARY-GENERAL TO THE LEAGUE
OF NATIONS: SIR ERIC DRUMMOND.

M. Alexandre Millerand was French Minister of War from Aug. 1914 to Nov. 1915.—Admiral Sims, of the U.S. Navy, recently stated that, on the eve of his leaving for England some weeks before the United States entered the War, he was warned: "Don't let the British pull wool over your eyes. It is none of our business pulling their chestnuts out of the fire. We would as soon fight the British as the Germans." Mr. Daniels, Secretary of the U.S. Navy, has denied that he used the words above quoted, "or any words that would convey a like meaning." He explains that, at the time,

Congress had not declared war, and Admiral Sims was warned not to do or say anything to commit the United States to any course pending an official announcement of its policy.—Sir Harold Stuart, a distinguished Indian administrator, has been appointed British High Commissioner on the Inter-Allied Rhineland High Commission.—Vice-Admiral Sir Edward Charlton (President) and the members of the Allied Naval Commission left Portsmouth for Kiel on January 15, in H.M.S. "Malaya," to ensure Germany's carrying out the naval terms of the Peace Treaty.

RENEWING COMMERCE WITH RUSSIA: HER CO-OPERATIVE SYSTEM.

BY A. M. ASANCHEYEV, C.E.

THE first co-operative societies in Russia were organised in the middle 'sixties of the last century. Being then few in number, isolated, and dependent on private traders as to goods and credit, they could not properly grow and develop until all the individual co-operative societies dispersed over the enormous area of Russia, united in one wholesale purchasing centre, and the necessary financial strength was furnished to this centre by depositing with it a part of the capital of each individual co-operative society as a working fund.

It took over thirty years of continuous work and hard struggle under the old conditions to attain this object, and on July 16, 1898, the first Russian co-operative centre, the Moscow Union of Consumers' Societies, obtained its charter.

If we certainly cannot deny the fact that the modern Russian co-operation, especially the consumers' societies, adopted the principles of the Rochdale weavers, we must also state that the ideas of co-operation and co-partnership were existing for centuries in the psychology of the Russian peasant and labourer, and the type of producing and working association ("artel") was known to them from the very beginning of Russian history. This tendency and habit of the Russian masses to unite their creative efforts, and to divide their economic burdens, explains the unprecedented growth and development of the co-operative movement in Russia.

There are three categories or classes of co-operation: the Co-operation of Consumers, the Co-operation of the Producers, and the Credit or Financial Co-operation.

The unit of the Consumers' Co-operation is the village consumers' society, which is formed by local farmers by raising capital composed of an entrance fee varying from 10 to 50 roubles (£1 5s.), and establishing an annual fee from 3 to 10 roubles per member.

The goods from the society's store are sold at market prices and against cash payment. At the end of the year, the members are entitled to receive their share of the profits as dividend; but in reality this distribution of profits takes place but very seldom. As a rule, the net profit is employed in part towards the increase of the society's capital, and in part is liberally contributed for subsidising public schools, libraries, village clubs, etc.

All the village societies of a certain district, government, or province form a local union, which acts as their wholesale purchasing agent; and all the local unions form a central union—the All-Russian Central Union of Consumers' Societies.

On Jan. 1, 1918, the latest reliable statistics showed the situation to be as follows—

Individual consumers' societies	over 27,000
Local unions	311
Individual societies with membership	
over 10,000	20
Total number of active members	10,269,757

The very large individual societies are mostly railwaymen consumers' associations, and the largest is the society "Ko-operatria" of the City of Moscow, with a membership of over 210,000.

Productive co-operation, embracing the various branches of human activity, could not possibly be organised on such a simple and uniform system as the co-operation of consumers. We will mention the most important central organisations.

The Central Union of Agricultural Societies controls the output of grain, and supplies its members with agricultural machinery, fertilisers, etc.

The Central Association of Flax Growers controls about 50 per cent. of all the Russian flax and hemp.

The Union of Siberian Creamery Associations controls about 60 per cent. of the Siberian butter production.

The Union of Northern Timber-Cutters' Associations has 35,000 active members, owns saw-mills, and can produce under normal conditions about 250,000 standards of timber.

The Union of Vaga-River Wood Distillers has

supplied the English market for a great number of years with tar, pitch, rosin, turpentine, etc.

The Central Association of Fruit and Vegetable-Growers unites the fruit and truck gardeners of Central Russia, and owns evaporating and canning plants and factories.

The Central Union of Home-Industries Associations produces and markets anything, from the finest pure-linen lace to a birch-bark bucket—toys, jewellery, felt-boots, ironmongery, images, wagon-wheels, and all sorts of artistic carved *bric-à-brac*.

Its unit is the village credit society, or a loan and savings association—in short, a village bank on a small scale. Their capital is formed by members' subscriptions, and money is advanced to members for the purchase of live-stock, seeds, and implements.

The individual societies form local unions, and their centre is the Moscow Narodny (People's) Bank, organised in 1911, with a capital of 1,000,000 roubles.

The present capital of this Central Co-operative Bank is 100,000,000 roubles, and the total turnover for the year 1917 was: Roubles, 5,823,578,394'15.

The total membership of the co-operative credit societies on Jan. 1, 1917, was 10,478,000.

The Moscow Narodny Bank is the principal financial institution for all co-operative organisations of Russia.

How punctually the individual co-operative societies, being managed only by peasants and workmen, fulfil contracted financial obligations, can be seen by the following example. In 1916 the total loans to the co-operative organisations amounted to 98,390,401 roubles. Out of this sum just one loan of 20,000 roubles, or less than 1-500th part of one per cent., was not paid. The reason of the non-payment was the German advance, which left the debtor society behind the enemy's lines.

This sketch would be incomplete if we left unmentioned the work of education and enlightenment pursued by the Russian co-operative organisations.

As long as it was possible, the co-operative organisations were issuing over 100 daily, weekly, and semi-monthly papers and periodicals. The "Non-Commercial Department" of the Central Consumers' Union issued in 1917 a total of 5,179,000 copies of books and pamphlets and 14,666 pictures, and its central library is a subscriber to 396 papers and periodicals. It organises schools, libraries, village and working men's clubs, cinemas, and peoples' theatres all over Russia. Travelling lecturers and instructors on co-operative work are counted by hundreds, and at the present time there are universities, technical colleges, institutes of forestry and agriculture, commercial schools, and many other educational establishments that could not exist without liberal contributions by the co-operative organisations.

The Russian peasant, who constitutes about 85 per cent. of the membership of the co-operative societies, generally belongs at least to two different societies. A conservative estimate of the total number of active members of Russian co-operation at present would be 12,000,000. As the co-operators are heads of families, and an average family consists of five members, so the number of individuals—men, women, and children—depending for their supplies on co-operation, will be about 60,000,000.

The united Russian co-operative system possesses about 50,000 stores, offices, and establishments, covering the whole country, which can serve as distributing centres for imported goods, and as collecting, storage, and shipping points for the raw material that has to be delivered in exchange for goods obtained. The whole apparatus of the village stores, local and central unions, is in working order, and will do the best work possible under the difficult conditions of transport.

So when the Supreme Allied Council in Paris decided to use the Russian co-operative system for the renewal of commercial intercourse with Russia, it obtained the collaboration of a prominently unpolitical body, with a highly efficient commercial, financial, and industrial organisation, at the same time eliminating any possibility of speculation and profiteering.

The question that people unacquainted with co-operative ideals and methods ask most often is this—

"Co-operation is existing and working under the Bolshevik régime—therefore you must be affiliated to the Bolshevik party?"

Most certainly—not. The co-operative system is a purely economic and financial organisation, and cannot be affiliated to any political party, exactly as there cannot be a Tory, Liberal, Unionist, or Labour party bank, even if the bank will keep party funds on deposit and pay their treasurers' cheques.



WHAT RUSSIAN CO-OPERATION WANTS: A NUMEROUS, PROSPEROUS, AND EDUCATED RUSSIAN FARMER FAMILY, IN THE GOVERNMENT OF VORONEZH.

The Russian productive co-operation owns and operates—

Flour mills	-	84	Agricultl. mach. shops	26
Bakeries	-	41	Choc. and sweet factrs.	18
Blacksmiths' shops	-	42	Saw mills	16
Soap factories	-	29	Sausage factories	15
Shoe factories	-	28	Iron foundries	10
Tanneries	-	28	Tobacco factories	4
Oil mills	-	27	Sugar mills	10

They need ten times as many, and quickly.

The credit or financial co-operation is organised very much on the same principles as the consumers'.



WHAT RUSSIAN CO-OPERATION SEEKS TO ABOLISH: THE VILLAGE IDIOT—A HALF-WITTED AND DEGENERATE BEGGAR, IN THE GOVERNMENT OF KOSTROMA.

TRADE WITH RUSSIA RESUMED: HER GREAT CO-OPERATIVE SYSTEM

PHOTOGRAPHS SUPPLIED BY M. ALEXANDER M. ASANCHEVYEV, CHIEF ENGINEER, CENTRAL RUSSIAN ALLIANCE CONSUMERS' SOCIETIES.

A CO-OPERATIVE FLOUR-MILL: AT RYBINSK, ON THE VOLGA
IN THE GOVERNMENT OF YAROSLAVL.A TYPICAL VILLAGE CO-OPERATIVE STORE AND TEA-ROOMS:
IN THE GOVERNMENT OF IVER.A LOCAL UNION OF CONSUMERS' SOCIETIES: AT ONGEGA, IN THE
GOVERNMENT OF ARCHANGEL.THE INTERIOR OF A CO-OPERATIVE VILLAGE DAIRY: IN THE
GOVERNMENT OF IVER.A TYPICAL UNIT OF THE GREAT CO-OPERATIVE SYSTEM WHICH IS SAID TO BE "THE ONE HOPE OF RUSSIA":
THE MANAGER, STAFF, AND GUARD OF A CO-OPERATIVE FLOUR-MILL AT SARATOV.

The Russian Co-operative system, which is now entrusted by the Supreme Allied Council in Paris with re-establishment of normal trade relations between Russia and the outside world, began its existence in the 'sixties of the last century. In June 1898 the Moscow Union of Consumers' Societies was organised with a capital of 800 roubles (£80), and made a turn-over in its first year of 31,340 roubles. In 1917 this Union was reorganised in the now existing All-Russian Central Union of Consumers' Societies (Russian abbreviation—“Centrosoyus”), possessed a capital of 10,269,757 roubles, corresponding to the exact

number of its active members, and exceeded the sum of 212,000,000 roubles as turn-over for that year. Nine Russian central co-operative organisations have now their offices in London. All these institutions, except one, are united in the London Joint Committee of Russian Co-operative Organisations (38, Finsbury Pavement, E.C.2), and two are registered as British Limited Companies. The Russian Co-operative system is in close contact with the English, Scotch, and Irish Co-operative Wholesale Societies, and never forgets the cradle of the co-operative movement, a modest three-storey brick building at Rochdale.

LUXURY IN AIR-TRAVEL: THE GROWTH OF AEROPLANE AMENITIES.

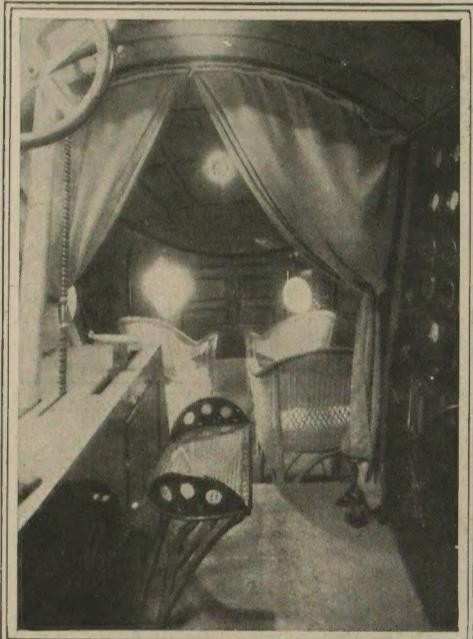
PHOTOGRAPHS SUPPLIED BY C.N. AND TOPICAL.



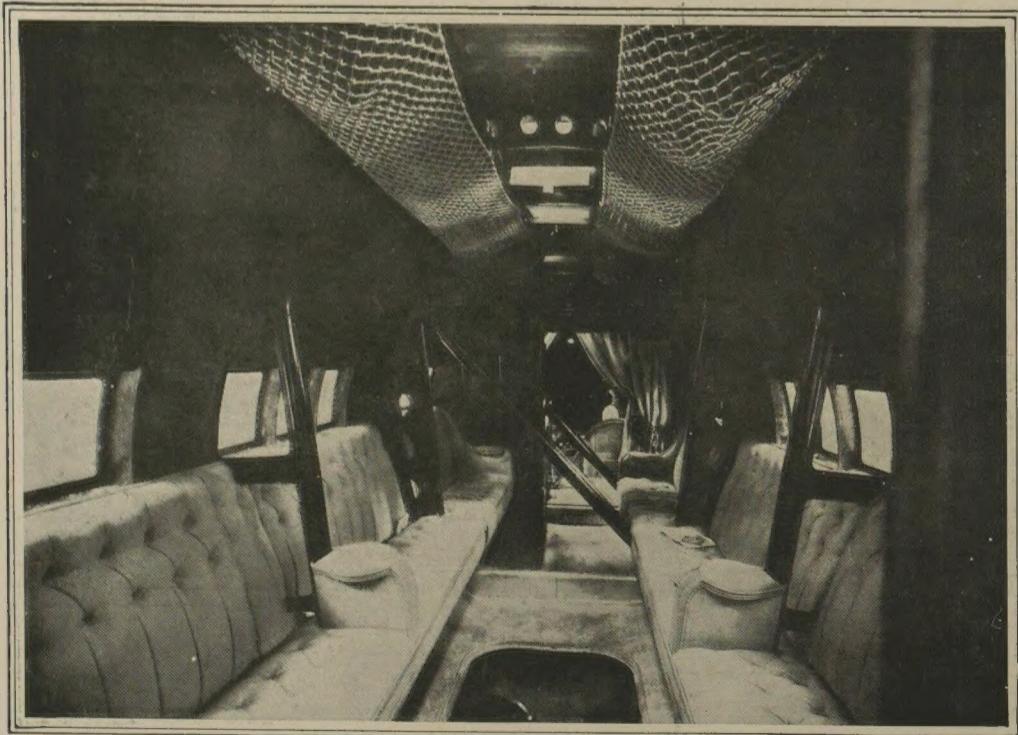
ALL THE COMFORT OF A PULLMAN CAR: THE SALOON OF A HANDLEY-PAGE PASSENGER AEROPLANE.



TASTEFULLY DECORATED: THE SALOON OF A LARGE VICKERS AEROPLANE.

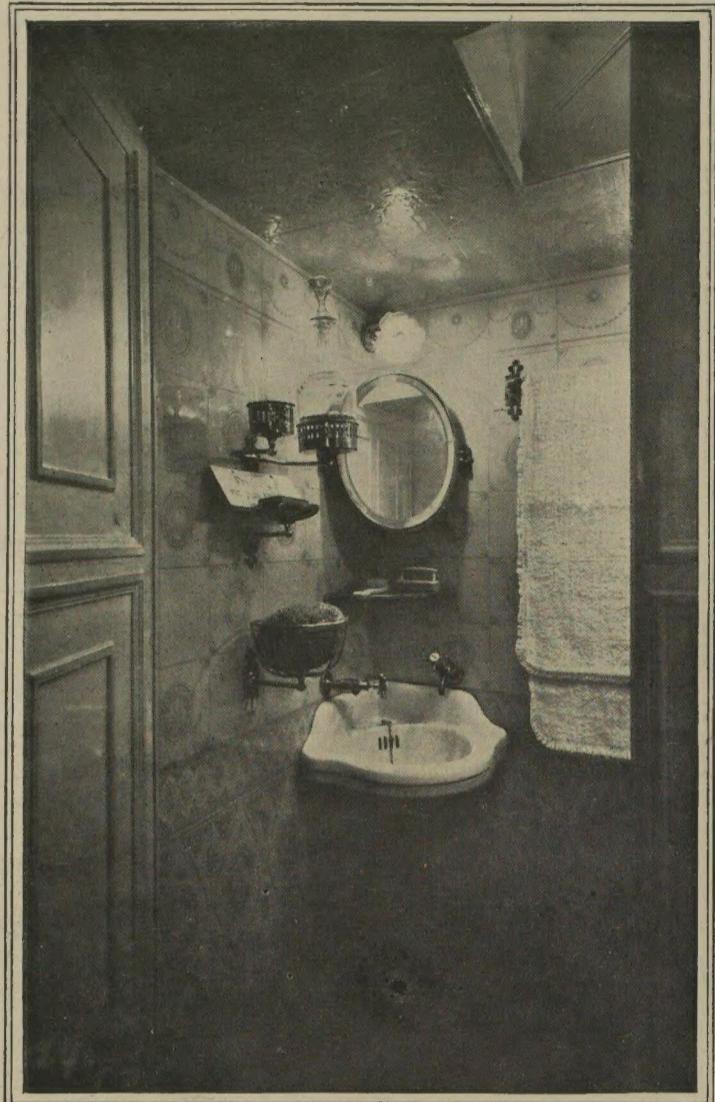


INSTRUMENT-BOARD AND LEVERS: THE FOREPART OF A BIG BLÉRIOT.

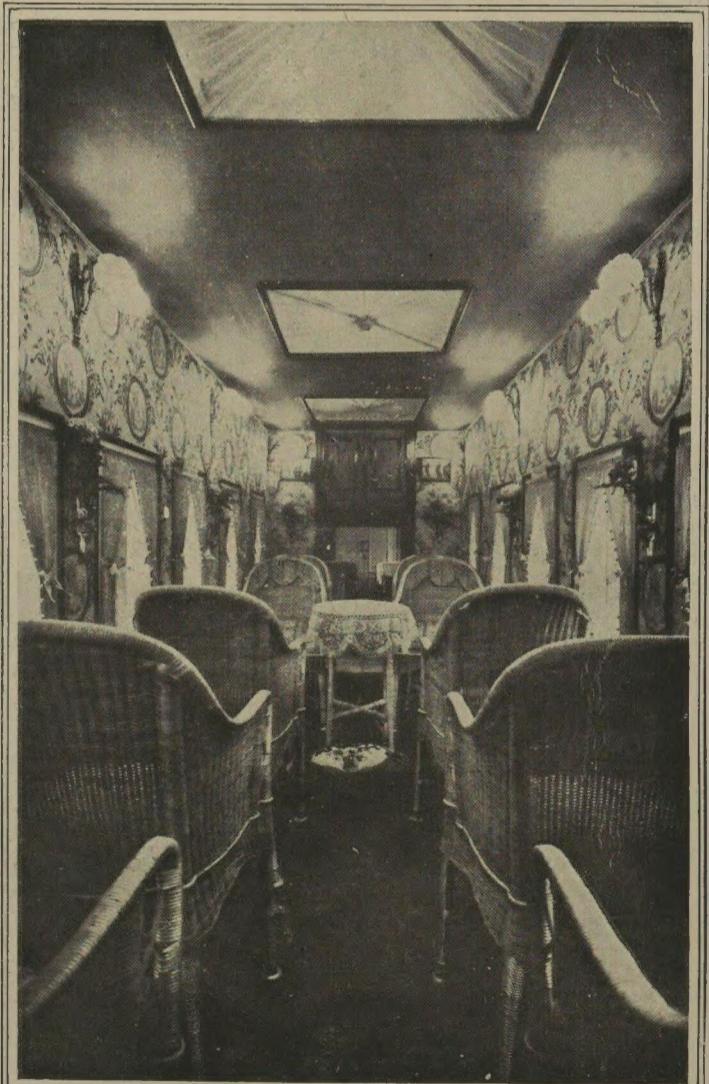


WITH SIDE SEATS COMFORTABLY UPHOLSTERED: THE SALOON OF A BIG BLÉRIOT AEROPLANE.

Just as the luxuries of ocean travel on board the modern liner have evolved, by degrees, from an original type of boat in comparison with which a Channel steamer would seem a floating palace, so, in the sphere of aircraft construction, the amenities of aerial travel are being developed, though in this case more rapidly. In the early aeroplanes, the accommodation for passengers was limited to one or two, and was of the plainest



FITTED WITH ALL MODERN ACCESSORIES: THE TOILET ROOM IN A GREAT CAUDRON AEROPLANE.

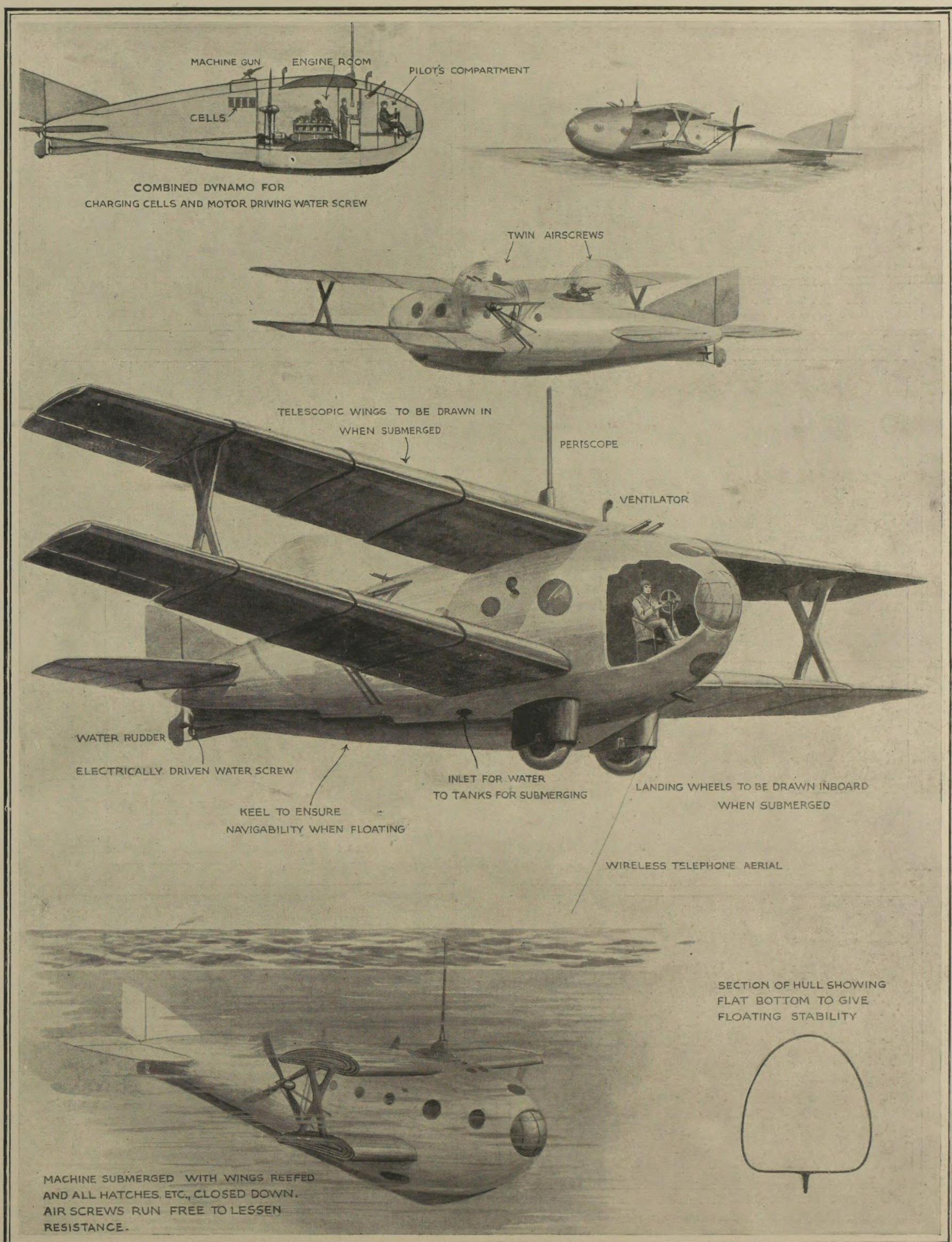


THE FRENCH STYLE OF INTERIOR DECORATION: AN ORNATE SALOON IN A GIANT CAUDRON.

character, without much, if any, protection from the rigours of the weather. As the machines have increased in size, the quarters provided both for pilot and passengers have become more and more spacious and comfortable. Nowadays, in the largest machines, comfort has developed into luxury, and the passenger saloons are equipped with all the appointments that taste and elegance can devise.

A FLYING SUBMARINE, OR SUBMERSIBLE SEAPLANE: THE TESSAURIAN.

DRAWN BY GEOFFREY WATSON. (COPYRIGHTED IN THE UNITED STATES AND CANADA.)



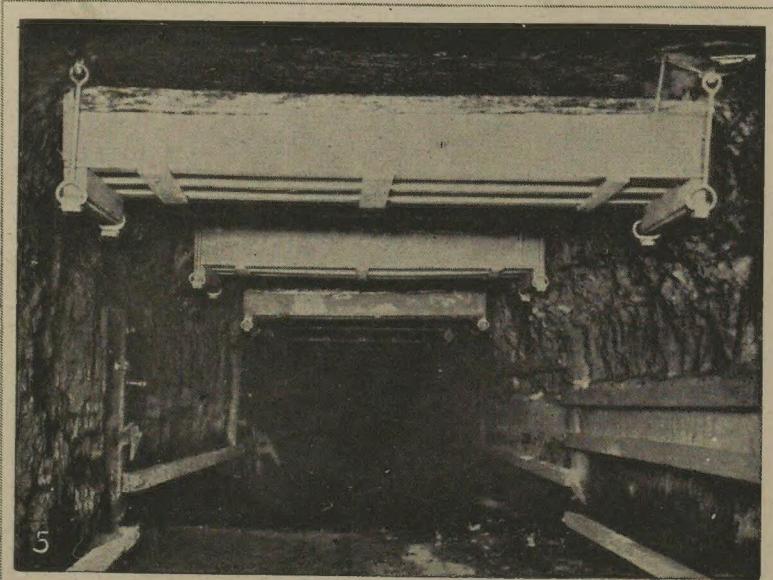
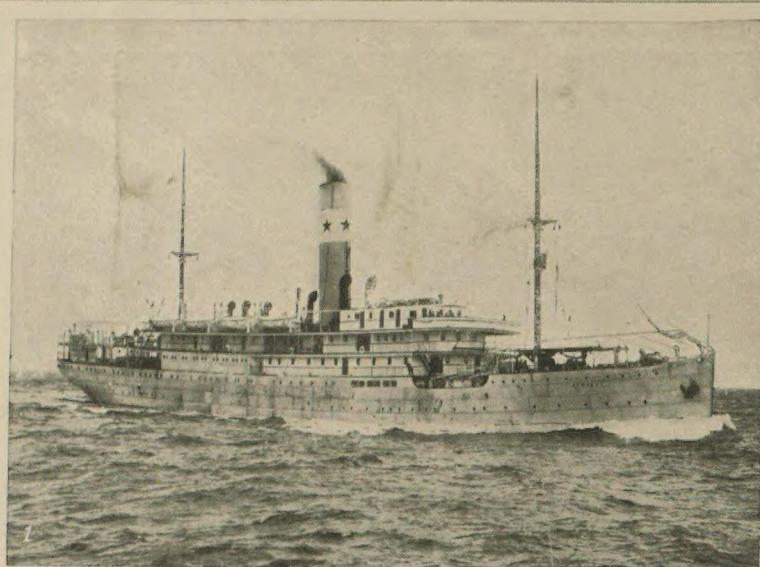
A WAR-MACHINE OF THE FUTURE THAT MAY REVOLUTIONISE STRATEGY: THE TESSAURIAN (A MONSTER WITH FOUR MODES OF LIFE) NOW BEING DESIGNED BY A LEADING AIRCRAFT COMPANY

War monsters stranger even than swimming tanks are now being designed, and their influence on strategy comes very seriously within the purview of the conferences now taking place between the First Sea Lord, the Chief of the General Staff, and the Chief of the Air Force. A designer for one of our largest aircraft companies is, for example, at work now upon a weird creature of which our artist has been permitted to prepare the pictures herewith, and which not only runs and swims, but also flies and dives.

It might, it is suggested, be called a "tessaurian"—implying, in an adaptation from the Greek, a creature which has four modes of life. When on the surface of the water it will look rather like a squat torpedo-boat, reefed metallic wings being visible along its sides. These wings, when extended, will lift it from sea to air, where it will have high speed. For a descent on land, a wheeled chassis can be lowered. The machine can dive like a submarine. Larger ones might carry torpedoes.

CAMERA NEWS: THE WRECKED "AFRIQUE"; POLITICS; COAL-MINES.

PHOTOGRAPHS BY TOPICAL, I.B., MANUEL, AND CENTRAL PRESS.



1. WRECKED WITH THE LOSS OF OVER 500 LIVES: THE FRENCH LINER "AFRIQUE."

3. ELECTING THE NEW PRESIDENT OF THE FRENCH REPUBLIC: THE VOTING IN THE CONGRESS HALL AT VERSAILLES.

4. TO PREVENT COAL-DUST EXPLOSIONS IN COAL-MINES: SPRAYING LIQUID CEMENT.

The liner "Afrique" had 599 people on board in all, and only some 43 were saved. She struck about midnight on the submerged rocks of the Plateau de Roche-Bonne, near La Rochelle, and sank about 3 a.m. on Jan. 12.—The Council of the League of Nations held its first meeting at the French Foreign Office in Paris on January 16, under the presidency of M. Léon Bourgeois. In our photograph are seen, at the far side of the table (from left to right) M. Venizelos (Greece), M. da Cunha (Brazil), Mr. Matsui

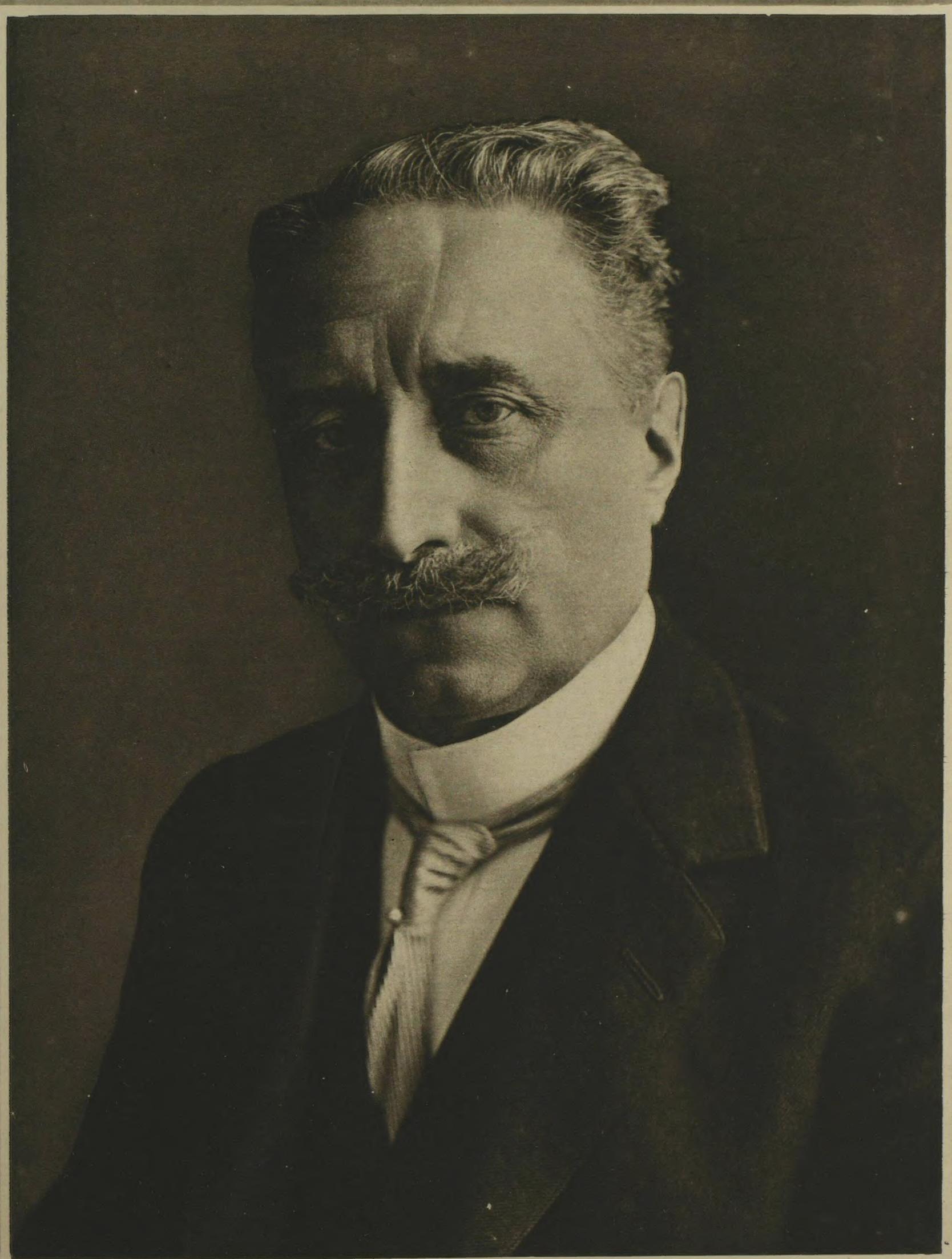
2. THE LEAGUE OF NATIONS IN BEING: THE COUNCIL'S FIRST SESSION, IN PARIS.

5. TO LIMIT THE EFFECT OF AN EXPLOSION: BOXES OF INERT COAL-DUST SUSPENDED.

(Japan), Earl Curzon (Great Britain), M. Léon Bourgeois (France), M. Paul Hymans (Belgium), and M. Quinones da Leon (Spain). Lord Grey was present.—M. Léon Bourgeois also presided at the Presidential Election at Versailles on January 17, which resulted in M. Paul Deschanel being chosen President.—The safety devices for coal-mines were introduced by the United States Bureau of Mines. Boxes filled with inert coal-dust are hung from the roof. An explosion would shatter them and the dust would check its spread.

THE NEW PRESIDENT OF THE FRENCH REPUBLIC.

PHOTOGRAPH BY TOPICAL.



ELECTED AS TENTH PRESIDENT OF THE REPUBLIC OF FRANCE: M. PAUL DESCHANEL, PRESIDENT OF THE CHAMBER.

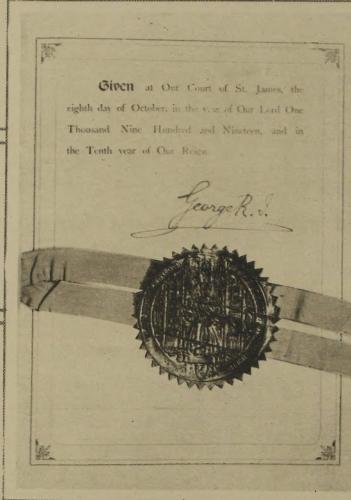
M. Paul Deschanel was elected President of the French Republic at Versailles on January 17, receiving 734 votes out of those recorded by the 888 Senators and Deputies present. The result was generally expected after the withdrawal of M. Clemenceau. The new President will replace M. Poincaré at the Elysée on February 18, and enter on his seven years of office. M. Deschanel was born at Brussels in 1856. After a career in the Civil Service he entered Parliament in 1885, becoming Vice-President of

the Chamber in 1896 and President two years later. He is an old friend of Great Britain, and was a strong supporter of the Entente Cordiale. As a writer he has won great distinction, and his recent works include "Victorious France" (a collection of his speeches) and a memoir of Gambetta. His family consists of his wife, a daughter of seventeen, and two sons, respectively fifteen and ten. Mme. Deschanel is expected to make a brilliant hostess at the Elysée.

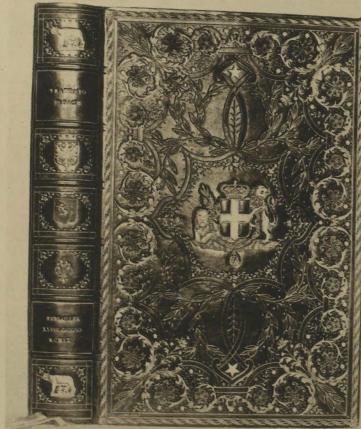
THE RATIFICATION OF THE PEACE TREATY: COPIES DEPOSITED AT PARIS BY SIGNATORIES.



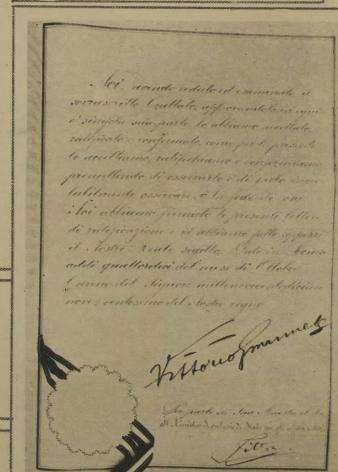
GREAT BRITAIN: THE BINDING OF THE BRITISH COPY.



GREAT BRITAIN: THE KING'S SIGNATURE TO THE RATIFIED TREATY, WITH THE GREAT SEAL.



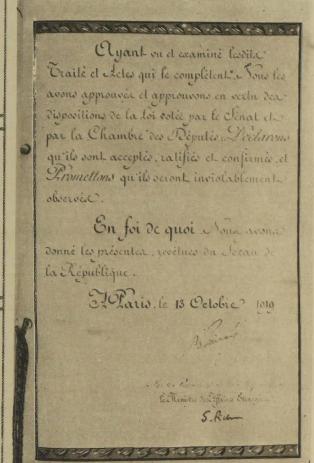
ITALY: THE ORNATE COVER IN WHICH THE ITALIAN COPY OF THE RATIFIED TREATY IS BOUND.



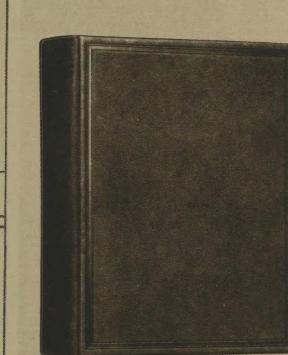
BEARING THE SIGNATURES OF KING VICTOR EMMANUEL AND SIGNOR TITTONI: A PAGE OF THE ITALIAN COPY.



FRANCE: THE BINDING OF THE FRENCH COPY, WITH THE GREAT SEAL OF FRANCE.



SIGNED BY PRESIDENT POINCARÉ AND M. STEPHEN PICHON: A PAGE OF THE FRENCH COPY.

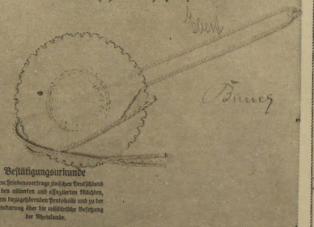


GERMANY: THE SEVERELY PLAIN BINDING OF THE GERMAN COPY OF THE RATIFIED TREATY.

von den gesetzgebenden Körperschaften des Deutschen Reichs genehmigt und mir vorgelegt worden sind, erkläre ich, daß ich den Vertrag, das Protokoll und die Vereinbarung bestätige, und verspreche, sie zu erfüllen und auszuführen zu lassen.

Berlin, den 9. Juli 1919.

Der deutsche Reichspräsident



BEARING THE SIGNATURES OF PRESIDENT EBERT AND HERR BAUER: A PAGE FROM THE GERMAN COPY.

The Treaty of Peace, which was signed at Versailles on June 28, 1919, was duly ratified at 4.15 p.m. on Saturday, January 10, 1920, in the Clock Room at the French Ministry of Foreign Affairs in Paris, and the Great War was thus officially ended. The ceremony was brief and formal. The final clause of the Treaty had required that the ratifications should be deposited at Paris, and that the Treaty would be in force when this had been done by Germany and three of the principal Allied and Associated Powers. Germany was the first to ratify, and subsequently this was done by Italy, Great Britain, France, Japan, and other Powers. The Treaty has not been ratified by the United States. The procès-verbal at the ceremony in Paris

stated that, in accordance with the Treaty, the signatories had met to deposit the ratifications and hand them over to the French Government to be preserved in its archives. The procès-verbal was signed first by M. Clemenceau, who was followed by Mr. Lloyd George, Signor Nitti, and Mr. Matsui (for Japan). Baron von Lersner signed for Germany, adding the words, "acting in the name of the German Empire and in the name of all the States composing it and of each one in particular." The ratifications consisted of copies of the Treaty signed by the heads of the various States. Each had had its copy specially bound; and the covers presented considerable variety, some being ornate in character, others severely plain.

A Great Champion of a Great Ideal: General Denikin.

By HOWARD SMITH.

IF the problems confronting General Denikin had been purely military his task would have been comparatively simple. His principal enemy, however, has been not the Red Army of the Bolsheviks, as is generally supposed, but the chaos of armed forces, political separatists, opportunists, intriguers, and pro-

(a congeries of tribes, tongues, and social systems), in the Don, the Kuban, and the Ukraine. It is she who has been the prime director of the Red Army and the numerous armed bands who have harassed Denikin on all sides.

German Soviets are installed at Petrograd and Moscow, German experts are running Bolshevik munition-factories, and German Staff officers are the Bolshevik military dictators.

Bolshevik propaganda and bribery, which have been brought to a high art and scattered on a colossal scale, are Germany's effort again; she keeps countless spies and agents in Soviet Russia and the border States.

Now Germany could crush Bolshevism in Russia to-morrow—if she wished. But she has steadily fixed her hopes upon the economic and political subjection of Soviet Russia to German domination. She has openly declared that she can make policy in Russia just as she pleases. And how much love she feels for that country can be estimated from her callous observation that "If we want a moral argument, we must say that Muscovy has earned from us no claim to any sort of mercy."

The sharpest thorn in the side of Lenin (and, of course, his German masters) has been Denikin. His spectacular advance to within 200 versts of Moscow, the Bolshevik stronghold, last summer, was a great military feat that could not have failed to bring complete ultimate success if his task had been purely military, as has been before observed. But to-day Denikin stands at bay with his back to the wall. He may recover, as he has recovered before from apparently hopeless positions. His reverses began when the Allied Governments decided, for domestic reasons, that they could not aid him any further; and this, coupled with the political intrigues which have hampered him on all sides, has brought about his present precarious position.

In his honest effort to iron out the creases in Russia's soul he has been variously described by people in England—who imagine, wrongly, that Bolshevism in Russia is a purely Russian phenomenon—as a "reactionary," an "adventurer," a busybody who has indulged in a meddlesome interference with Russia's future destiny.

In answer to that, those people should be reminded that General Denikin, as long ago as August 1918, defined the aims of the Volunteer Army in the following words: "The Volunteer Army cannot become a weapon for one or another political party or public organisation. Then it would cease to be Russia's State Army. The Army will never try to restrain other people's thoughts and consciences. The Army says to you simply and honestly, 'Whether you belong to the Left or the Right, love your tortured native land and help to save her.'"

General Denikin's civil Administration, which was purely temporary and designed to facilitate the work of the Volunteer Army until union was effected with Koltchak, whom he recognised as supreme, represented all shades of political opinion, and the main heads of the policy of this Administration were: (1) Abolition of Bolshevik anarchy and institution of law and order; (2) Reconstruction of a powerful, united, and indivisible Russia; (3) Convocation of a People's Assembly based on universal suffrage; (4) Decentralisation by means of wide regional autonomy and liberal local self-government; (5) Guarantee of full civil and general freedom; (6) Immediate agrarian reforms with a view to meeting demands for land by the working classes; (7) Immediate Labour legislation, securing the working classes from exploitation by the Government or by capitalists.

General Denikin has rigidly adhered to that policy. With unfailing singleness of

purpose he has struggled for the realisation of a great ideal—i.e., the re-establishment of unity, order, and prosperity in his unhappy country.

While we, Great Britain, our Allies and Associates, were still fighting the Central Powers, the struggle was maintained by Denikin and his little band of devoted men. He has been the friend of the Allies throughout, and has with grim fortitude, even when his fortunes were at their lowest ebb, refused to temporise with the Germans or their Bolshevik puppets.

The military history of Denikin and his Volunteers is an epic even more romantic and splendid than that of the Czechoslovaks in Siberia. The difficulties he had to overcome were enormous, particularly at the storming of Ekaterinodar in April 1918, when his army was completely surrounded by a deep ring of Bolshevik bands, suffering every possible privation, fighting and marching without rest or respite day or night, without a base, without war material of any kind beyond what they captured from the enemy, with an enormous encumbrance of wounded, and with a declining moral consequent upon the loss of General Kornilov, Denikin's predecessor, who was killed by a shell. These difficulties were enough to turn the stoutest heart. I have been privileged to work

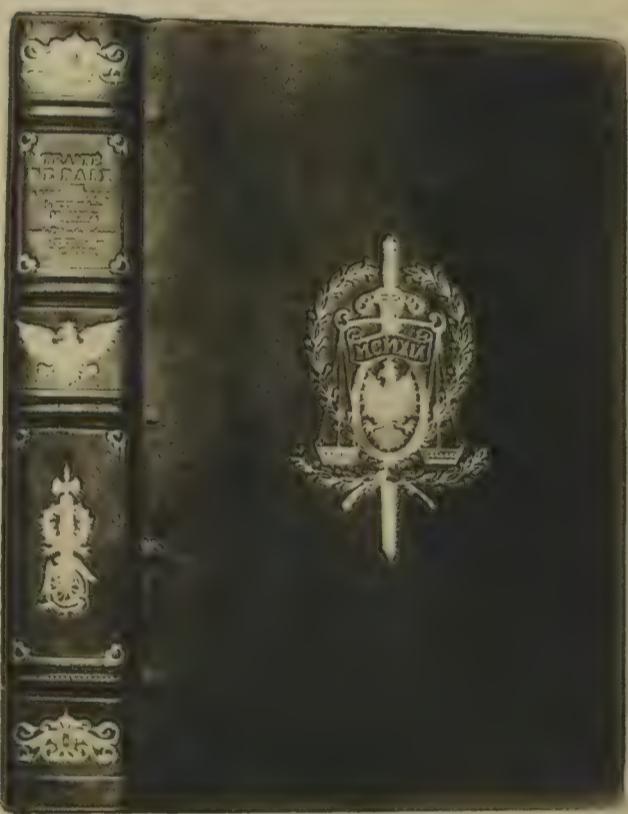


BELGIUM'S RATIFICATION OF THE TREATY OF VERSAILLES: THE BINDING.

iteers which has beset him at every single point in his rear.

The history of recent happenings in Russia, if it could be truthfully and impartially written, would make at once a sordid and a splendid story, showing, as it would, underhanded cunning on the one hand, and single-minded patriotism on the other.

Germany has made a sustained effort to sit astride the neck of prostrate Russia. It was the German General Staff who set alight there the fire of anarchy by smuggling Lenin into Russia when it was realised that the provisional Government of Kerenski was deter-



THE REPUBLIC OF POLAND'S RATIFICATION OF THE TREATY OF VERSAILLES: THE BINDING.

for Denikin as a member of the British Military Mission: it does not matter what he is called by ignorant critics, as I know with what esteem he is held by all members of that Mission, from the General Commanding downwards. And that esteem he has won by his transparent honesty, his simple living, his strength in the face of immense difficulty—and surely no man has ever voluntarily shouldered a greater responsibility than he. But, like all great leaders of men, he carries his responsibility lightly, and his dry humour never leaves him.

He has a profound contempt for the great vanities, but can be magnanimous to trivial vanities in his opponents. As you face him, you see the unswerving honesty in his fine dark eyes. You feel that you are in the presence of one who is accustomed to command with perfect assurance, and equally ready, if need be, to obey. No wonder he has the affection and respect of all those who come in contact with him. He is one of the few men on this earth one would gladly work himself to death for.

That is Denikin.



THE CZECHOSLOVAK REPUBLIC'S RATIFICATION OF THE TREATY: THE BINDING.

"THE STRUGGLE WILL GO ON": RUSSIA'S ANTI-BOLSHEVIST LEADER.

DRAWN FROM LIFE AT A SPECIAL SITTING GRANTED TO CAPTAIN HOWARD SMITH, AT TAGANROG, IN SOUTH RUSSIA, ON OCT. 27, 1919.



HEAD OF THE RUSSIAN ANTI-BOLSHEVISTS SINCE ADMIRAL KOLTCHAK RESIGNED: GENERAL DENIKIN.

It was stated on January 19, in a report on the situation in Siberia since Admiral Koltchak's resignation: "the supreme authority was handed over to General Denikin too late to prevent an uprising (at Irkutsk)." General Denikin has also suffered serious reverses. The Bolsheviks claimed to have captured from him between December 21 and January 9, "25,400 prisoners, 650 guns, 11 Tanks, 660 machine-guns, 9 armoured trains," and an immense quantity of other war

material. The British Military Mission with General Denikin's armies, which recently went to Ekaterinodar, reported that on January 15 the Caucasus Army had repulsed five attacks, the Don Army was holding the line of the Don, and the Volunteer Army a line north of the Crimea. They denied the rumour that General Denikin had been superseded. He is reported to have said recently: "The struggle will go on."—[Drawing Copyrighted in the United States and Canada.]

The Dying City: Petrograd of To-day.

BY JOHN POLLOCK.

HAVE you seen a city dying? Not a city or a town dead, with the sight of which everyone who has been on any front during the war is but too familiar, but one gradually dying, wasting from day to day, being crushed, stifled, starved, of malice aforethought, by criminal who are its national enemies—and ours. I have seen such a city. It is Petrograd, the capital of our Allies' country, Russia. Russia lost close on two million dead in the war. Her invasion of Prussia in 1914 drew off the German pressure on the West and saved the capital of France. Her capital was taken by the enemy in October 1917, and is being gradually destroyed by them. That enemy is called the Bolshevik Party, but is no less an agent of Germany than were the Turkish and Bulgarian armies. And we allowed this to happen, and allow it to go on, because the eyes of patriotic Englishmen who fought like lions against Germany on the battlefield or in the factories are clouded by the dense smoke of propaganda squirted out by Germany's agents.

Petrograd is dying. The Russian metropolis, one of the most splendid cities in the world, set upon the banks of a great river, full of trees and broad spaces and noble churches, pleasingly intersected by the irregular course of five canals, boasted in October 1916, a population of 2,500,000 souls. By October 1918 this number was reduced to 900,000. By October 1919 this 900,000 had wasted to 400,000. Now there are probably not above 250,000 inhabitants in the town.

What has happened to the remainder—to the 1,250,000 who have disappeared? Have they left Petrograd? Some, no doubt; but how many could? In the first place, travelling in Bolshevik Russia is impossible except for people who can allege urgent business. For the ordinary public travelling is prohibited. Even for those who have or can invent such business it is a matter of weeks to get the necessary permits, ticket, and—hardest of all—a seat in a train. And, were travelling not prohibited, there are not trains to carry such a mass of people. From Petrograd to

it would need nearly two years to evacuate the population of Petrograd if the trains did no other work. But, in fact, the trains were almost solely occupied by Soviet officials, Red Army officers, and profiteers enjoying a pull with the Bolshevik authorities.

Further, if the population had the possibility of making such an exodus, whither could they go? They have no homes away from Petrograd; they could find

stench from corpses abandoned in the surrounding flats and slowly rotting.

And in such circumstances what can life be? No one, in the first place, goes anywhere unless he has to. Movement requires expenditure of energy; expenditure of energy represents food; food is hard to get, and when got, bad. In addition to the derisory pittance of daily bread, the ten herrings and ten pounds of potatoes a month that compose almost the whole of the lawful rations, food must be obtained in street markets or of smugglers so that life may be supported at all; and to find it absorbs almost the whole of a man's time and thought. Cabs practically do not exist; most of the horses have been eaten, and the few remaining izvoshchiks charge fares prohibitive except to Bolsheviks. Other people must carry everything on their backs or in their hands. The tramway service works intermittently. Trams are incredibly overcrowded, and a place only to be obtained after a fierce struggle.

No one speaks, for each fears a spy in his neighbour. The least expression of disapproval may be taken amiss, or distorted and made the basis of an arrest for "counter-revolutionary" activity—by which is meant that of those who are opposed to the Bolsheviks. Streets that once were crowded with as brilliant an assemblage as any in Europe are now all but deserted. The rare passers-by labour along with feeble limbs; they are crawling from their work, where they have been sitting cold and hungry, to homes where they will be scarcely less hungry and hardly warmer. No shops are open save barbers, and perhaps a few toy and fancy-goods establishments, except—*mirabile dictu!*—Golz, Alexander, Treumann, and other German shops that have been reopened by permission of the Bolsheviks. After nightfall all life stops. The theatre public consist exclusively of Bolshevik employees, sailors, porters, and the like; many of the theatres are shut. No one else goes out; where is there to go? And the black, empty



THE STATE TO WHICH PETROGRAD HAS BEEN REDUCED BY THE BOLSHEVIST RÉGIME: THE NEVSKY PROSPECT—ONCE ONE OF THE MOST CROWDED STREETS IN EUROPE—DESERTED, AND PATROLLED BY BASHKIR CAVALRY.

The photograph was taken at mid-day on the day of the second anniversary of the Bolshevik revolution, and shows well the deserted state of what was once one of the most crowded streets of Europe. The Bashkir cavalry are half-savage Tartars from the Steppes round Orenburg.

neither lodging nor livelihood. No; for the most part the population of Petrograd has stayed in Petrograd—stayed there, and there died.

They have died of hunger and disease. Not to mention those shot by the Bolsheviks in Petrograd in the course of fifteen months—a mere twenty or twenty-five thousand, insignificant in the eyes of our would-be reformers—the inhabitants of Petrograd have died by the hundred thousand of small-pox, typhus, the Spanish sickness, scurvy, and inanition. The mortality among the children has been frightful. I knew a young mother who in October 1918 went to bury her child. At the cemetery—one of the five or six of Petrograd—she counted eighty-one other children's coffins brought that day and awaiting burial. Eighty-two in one day at one graveyard! And October 1918 was a month of plenty to be compared with the succeeding four months and the months that have followed them.

According to figures compiled for the Bolshevik authorities themselves, 80,000 people died in Petrograd in December 1918, 120,000 in January 1919; and, of those 200,000, 16,000 died of starvation alone, without assistance from the frightful scourges that were raging. Since the autumn of 1918 the diseases mentioned have never ceased in Petrograd, but in those two months furious epidemics of typhus, small-pox, and glanders held the city in their grip.

In such circumstances, all solemnity—all decency even—of funeral rites ceases. Coffins becoming impossible to obtain, they were used over and over again—hired out to take their cold tenant to his last resting-place, and then brought back for another. Coffin-rent at Christmas 1918 was from sixty to eighty roubles a journey, the equivalent at the old rate of £6 to £8. Then graves gave out. There was no possibility of burying the huge numbers of the dead individually; all were hustled together into the common ditch. And even so, corpses lay for days in houses before conveyance to the cemetery could be found. The last state of things is the abomination of desolation.

According to the report of a credible witness recently escaped from Petrograd, practically all the children in the city are dead. How should they not be after eighteen months of starvation, and when in the midst of the Russian winter the houses are stone cold? And even in the frozen streets there is a



COLLECTED BY BRIBES OF WHITE BREAD AND BY THREATS: THE OFFICIAL PROCESSION IN THE DESERTED NEVSKY PROSPECT ON THE SECOND ANNIVERSARY OF THE BOLSHEVIST REVOLUTION.

The official procession was got together by a combination of threats and bribes which took the form of pieces of white bread. The great street was empty, although on such an occasion everyone Bolshevikly inclined, however mildly, should have shown enthusiasm!

streets of the once proud capital become a likeness of Death that is even now stretching out his wing to touch the last remains of the cultured life of Russia.



BUILT ON THE FROZEN NEVA, FOR THE ANNIVERSARY: A TRIUMPHAL ARCH: WITH THE SPIRE OF THE CHAPEL OF ST. PETER AND ST. PAUL IN THE BACKGROUND.

In the Fortress of St. Peter and St. Paul the Bolsheviks have put to death, by shooting or by other methods, thousands of Russians whose only crime was love of liberty and hatred of the Germans.

Moscow in January 1919 there were two trains a day, and one each to Vologda and Rybinsk, which offered practically the only other means of egress from the capital. Supposing each carried five hundred passengers,

TAKEN AT THE RISK OF DEATH: RECENT PHOTOGRAPHS IN PETROGRAD.

PHOTOGRAPHS SUPPLIED BY MR. JOHN POLLOCK, RECENTLY SPECIAL CORRESPONDENT OF THE "TIMES" AND "DAILY MAIL" ON THE PETROGRAD FRONT.



A BARRICADE ON THE RIVER QUAY NEAR THE SUMMER GARDEN: AN OVERTURNED BARGE.



ON THE NEVSKY PROSPECT: A BARRICADE FOR A BATTERY OF HEAVY GUNS.



FORTIFICATIONS ON THE CHAMP DE MARS: PILED LOGS.



ON THE BOLSHEVIST MIDDLE LINE OF RESISTANCE AGAINST YUDENITCH: FORTIFICATIONS COMMANDING THE CATHERINE CANAL.



SHOWING THE CHURCH BUILT WHERE TSAR ALEXANDER II. WAS MURDERED: FORTIFICATIONS ON THE CATHERINE CANAL.



DEMOLISHED TO BUILD BARRICADES: A WALL AT THE WINTER PALACE.



DECORATED FOR THE SECOND ANNIVERSARY OF BOLSHEVISM: THE GRAVE OF URITSKY.



WANTONLY DESTROYED FOR BARRICADES: THE PORTICO OF THE WINTER PALACE.

These photographs represent a unique achievement. They were taken at the risk of a man's life. They are themselves unique, inasmuch as they are the only pictures made for these many months past of the actual state of Petrograd, and though they are unfortunately imperfect, probably owing to under-exposure as the result of nervousness, yet it is remarkable that they should have been taken at all. They were taken by a spy—neither an Englishman nor a Russian—who got into Petrograd during General Yudenitch's

offensive in October last. Not only is it a criminal offence for any private person to use a camera in "Sovdepia," as loyalist Russians call Soviet Russia, but had the agent been detected taking these and been arrested, his disguise would have been pierced, and he would have been shot to a certainty. The photographer consequently had to adopt peculiar precautions so as to avoid notice. The two central photographs show the solid character of the defences built to command the Catherine Canal.

THE NEW DESPOTISM IN RUSSIA.

By PAUL DUKES.

THERE are more and more signs that the Bolshevik régime, resembling in so many ways that of the Tsar's bureaucracy, is coming to rest in an ever-increasing degree on elements far removed from the proletariat. The army cannot be run without officers. The factories, such as work, cannot do so without industrial experts; the people, especially what remains of the workmen, passively acquiesce or are whipped into subservience just as they were in the olden days. Would that our workmen at home could have heard Zinovieff, Head of the Petrograd Commune, exclaim, "Though Tsarism was bad, yet its State mechanism was good"!

Let it not be imagined that Red victories are due to burning revolutionary ardour, fiery devotion to the despotic Communist caucus, determination to defend a system of government by packed Soviets—or to defend any form of government, for that matter. How much revolutionary ardour exists in the army was shown when Yudenitch advanced on Petrograd in October, and there deserted to him an army of Reds double the size of his own forces, while he could have taken thousands more had he been able to feed them. Yet the winning side is a heavy factor, and once fortune favours the Reds desertion diminishes. The tendency is ever to stay on whichever side seems likely to end the war soonest.

The cardinal question in Russia is the land. That is what the peasant *will* fight for. Soviets or a Tsar? Lenin or Nicholas? It is entirely indifferent to him, if he have the land—and order. The one undeniable and most irrevocable result of the revolution is that the land belongs henceforth to the peasants that work it. The Bolsheviks had good reason to convince themselves of this when they changed their name to "Communists" and attempted to "communise" the land. "Thou shalt not call the land thine own—it is equally thy neighbour's. Neither is thy plough thine own—it is lent thee by the State." The Communists were soon compelled to annul that decree.

The "White" leaders have their *entourage* to thank in part for putting a weapon in the hands of the Bolsheviks on this very question. It has been a case with them at times of "Save me from my friends." There are, fortunately, but few men foolish enough to imagine that a return to the former land-owning system is a possibility. Yet those insignificant few have done infinite harm to the cause of democratic freedom in Russia by airing their antiquated views in the sunlight of the White régime which permitted free speech by all.

One "proclamation" of doubtful origin on the Petrograd front last summer, a proclamation vigorously denied by General Yudenitch, which suggested a restriction of the peasants' right to the land, was seized upon by the Bolsheviks and published in every town, village, and hamlet in Soviet Russia. Of its repudiation, of course, never a word was said.

The main object of Bolshevik propaganda within Russia now is to prove to the peasants that the first thing the White leaders will do if they secure power is to "restore the dictatorship of the land-owners and bankers." Everyone knows the inciting force of Bolshevik propaganda, above all upon the ignorant. The Communists are masters of it. And knowing the real programme of the White leaders, their first step was to see that not a word of that programme reached the Russian workers and peasants. This is why they seized and closed down every organ expressing views other than Bolshevik. Not only every middle-class newspaper, but every Socialist paper (and they were mostly the latter) was suppressed long ago. And Bolsheviks being proclaimed the only true Socialism, all other Socialists were stigmatised as "counter-revolutionaries," "social-traitors," and lackeys of that inveterate enemy and 'oppressor of the proletariat—the middle-class, or bourgeoisie.'

Many "counter-revolutionary" organisations have existed secretly in Soviet Russia to spread information

regarding the real aims of other parties. But all have fallen a prey to that most hideous institution, the Extraordinary Commission, whose endless toll of lives includes all the workmen's leaders and the finest minds in Russia.

I remember once last summer, when I was walking not far from the Putiloff Works in Petrograd, I picked up a sheet of typewritten paper in the street. It was an illegal leaflet of the Social-Revolutionary Party, enumerating the misdeeds of the Bolsheviks. It contained the text of an anti-Bolshevik resolution of the men of the Putiloff Works, demanding a free Press and the right of free speech and free meetings. It also demanded the liberation of Maria Spiridonova, who was condemned to death by the Tsar for the assassination of one of Russia's most brutal police officials. The Tsar "graciously" commuted the sentence to exile to Siberia for life. The great revolution of 1917

shoot them. In September last the Bolsheviks discovered its leaders and their secret committee. Seven hundred arrests were made in Moscow, and every man or woman whose adherence to this party was suspected was shot.

The influence of this disaster on the remaining intelligent anti-Bolshevik elements in Russia cannot be over-estimated—especially upon the officer class. The National Centre was their last hope. It must be remembered that the officer class has always held aloof from politics and joined even the March revolution only when it had become an established fact. Terrified by the reprisals taken against conspirators, and gradually losing hope in the Allies and the White leaders, the officers were already previously tending to submit wholly to the Bolsheviks to save themselves and their families. On the other hand, the Bolsheviks extend every privilege to those officers whom they believe are not conspiring against them. Far greater authority is given them than ever they had in the Tsar's army. They have absolute power over their soldiers. Even the control of the regimental Commissaries is being gradually removed, and soldiers' committees, as is well known, were abolished long ago. The officers are very well paid and their families provided for. There is no doubt that these conditions are very alluring. Many reactionary officers, while loathing the personalities of the present rulers, are secretly pleased at the rigid despotism of the Bolsheviks, which resembles so strongly that of the Tsar's régime, and hope that the present régime will lead to violent reaction.

I remember, after the famous meeting when Trotsky summarily abolished all sailors' committees in the Baltic Fleet, how a naval officer exclaimed to me significantly, "If only Trotsky were not a Jew—!" "Well," I said, "what then?" "Why, we would follow him at once," he replied. "Trotsky cannot last for ever."

The industrial expert, also, faced with the alternative of being hauled before the Extraordinary Commission for sabotage, allured by enormous salaries and power over his workmen almost equal to that of the officers over their soldiers, works, sometimes heartily, sometimes with secret longing for the Whites, but still works for the Bolsheviks.

As for the participation of the masses in the affairs of Government, I have often spoken of the terrorist methods of electing, the seizure long ago of the leaders of the workmen, the rule in the provinces of Committees of Village Paupers, and the subsequent packing of the village Soviets.

It is a common sight to see groups of workmen—always the more intelligent—being escorted through the streets to the Extraordinary Commission by guards (often Chinese or Letts), charged with desertion from the army or "counter-revolutionary" agitation.

It looks as if, with the collapse of the national forces, the "Proletarian" Republic—where the workers toil to enrich their former managers, where the peasant is virtually excluded from the vote by the suppression of a free elective system, where the administration of the country is centred in the hands of a small political caucus, where the expression of views distasteful to the dominant political party is a crime, where free speech is forbidden, a free Press abolished, free meetings prohibited, where Liberty, Equality, and Fraternity are branded as antiquated shibboleths of a defunct civilisation and the watchword of the day is *Class Hatred*—it looks as if this "republic" is to have a further lease of life. Its leaders are to be allowed to dupe the world a little longer and continue to pose with such bitter cynicism as the "Workers' and Peasants' Government"—in which there is not a single worker and not a single peasant.

And Russia? *Gdzie ti, Rus?* Where are Thou? The spirit of Russia is slow in awakening. The nightmare is long, but it cannot last for ever.



A PEASANT FROM THE GOVERNMENT OF TULA, NEAR KRASNAYA POLIANA, TOLSTOY'S BIRTHPLACE.

gave her freedom, but as she was not a Bolshevik and not afraid to say so, the Bolsheviks shut her up in a mad-house. A dangerous business that of distributing "counter-revolutionary" literature such as this in the streets! Whoso found doing it is doomed—happily if only to death. Most surely will he be engulfed by the jaws of the Extraordinary Commission. Likewise any reader, or person, in whose possession such vile composition be discovered.

The largest of these organisations was known as the National Centre, and comprised people of all views except extreme Monarchists and Bolsheviks. Many Socialists belonged to it. Their programme included complete cession by decree of all lands to the peasantry on a basis of small holdings, separation of Church and State, restoration to workmen of positions of control on factory committees (now controlled by the Communist Party), and the convocation of a National Assembly.

The masses of the people, of course, could have no knowledge of the existence of such a party or such a programme. The National Centre acted under conditions of extreme difficulty and danger, and the identity of its members had to be kept in profound secrecy. The Bolsheviks knew of its existence, and feared it above all else for its truly democratic character. No pains were spared to ferret out its members and

NOW "ENTIRELY DISPERSED": KOLTCHAK'S ARMY RETREATING IN SIBERIA.

PHOTOGRAPH BY DR. LUDOVIC GRONDJIS.



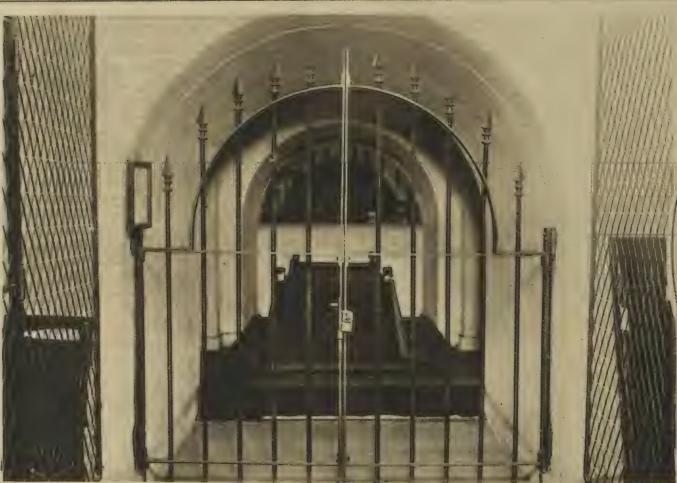
RETREATING EASTWARD ACROSS SIBERIA BEFORE THE ADVANCING TIDE OF BOLSHEVISM: TROOPS OF ADMIRAL KOLTCHAK,
WHOSE RESIGNATION WAS RECENTLY ANNOUNCED.

Along with the news of Admiral Koltchak's resignation, it was stated that all his troops at Irkutsk had gone over to the Social Revolutionaries there, and, according to Japanese military intelligence, his army was entirely dispersed. Our photograph was taken during an earlier stage of his retreat across Siberia. Bolshevik reports have since continued to chronicle the advance of the "Red" armies towards Irkutsk, "with the same seven-league-boots as heretofore," and the capture of much booty. A Moscow message of January 13

said: "The victories of the Red troops are colossal. The enemy's forces are either already annihilated or on the point of annihilation. But the menace of Japan and the vassals of the Entente in the West still compel the Soviet authority to devote a great part of its forces to military purposes." Another Bolshevik message said: "The Soviet Army will soon arrive near the Japanese, but will not undertake any aggressive action calculated to provoke a collision."

THE "WESTMINSTER" OF THE UNITED STATES: LITTLE-

PHOTOGRAPHS SUPPLIED



SHOWING THE BIER USED FOR THE FUNERALS OF LINCOLN, GARFIELD, MCKINLEY, AND ADMIRAL DEWEY: A TOMB INTENDED FOR GEORGE WASHINGTON.



A MUSEUM OF OBITUARIES: ROOM, CONTAINING THOUSANDS

KNOWN CORNERS OF THE CAPITOL AT WASHINGTON.

BY TOPICAL.



THE MORGUE IN THE FOLDING ROOM OF MEMORIAL SPEECHES.

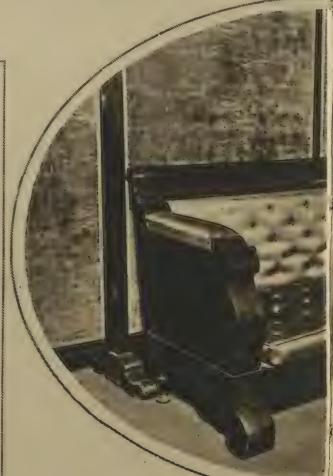


WITH SENATORS POINDEXTER AND DIAL, ON THE FRONT SEAT: A TRAIN ON THE ELECTRIC SUBWAY FROM THE CAPITOL TO THE SENATE OFFICE BUILDING.



AN IDEA OF THOMAS JEFFERSON: A PILLAR OF CORNSTALK DESIGN AT THE ENTRANCE TO THE LAW LIBRARY.

BENEATH the rotunda of the Capitol is a chamber formed by a colonnade of Doric columns. Below this a crypt was designed to be the tomb of Washington. A resolution passed by Congress, December 23, 1799, stated that the body of George Washington should be placed in this crypt, but at the wish of the family his remains were placed in the tomb at Mt. Vernon, Va. The bier shown in the picture was used for the remains of Presidents Lincoln, Garfield, President McKinley, Senator Trumbull and Bakewell, and Admiral Dewey, whose bodies lay in state in the rotunda of the Capitol. The Morgue in the Folding Room contains thousands of memorial speeches on deceased Members of the House of Representatives and the Senate. Electric subway trains run from the Capitol to the Senate Office Building, and on stormy days the Senators ride to and from their offices. Leading out of



AN OLD MAHOGANY BENCH UPON WHICH JOHN A HISTORIC RELIC NOW IN THE



QUINCY ADAMS DIED ON FEBRUARY 21, 1848: SUPREME COURT CHAMBER.

the centre of the Capitol is a small but beautiful corridor to the entrance of the Law Library of the Supreme Court. The thought of Thomas Jefferson is here worked out, for that great pioneer of democracy held, it is said, pillars in American public buildings should be made in imitation of cornstalks and corn. He was influential enough to have his suggestions carried out in this corridor, and every visitor that enters this way stops to view this beautiful work of architecture. In the Supreme Court Chamber is an old mahogany bench, upon which John Quincy Adams passed away on February 21, 1848. It was at that time in the office of the Chief Clerk of the House. The Capitol has its expert decorator and designer. One photograph shows Mr. C. E. Moberly, who has been the Capitol designer for twenty-five years, at work retouching an old painting.



DESIGNER AT THE CAPITOL FOR TWENTY-FIVE YEARS: MR. C. E. MOBERLY RETOUCHING AN OLD PAINTING.



DISPersed BY MACHINE-GUN FIRE, WITH MANY CASUALTIES: THE HUGE DEMONSTRATION OUTSIDE THE REICHSTAG, IN BERLIN.

On January 13 a huge assemblage gathered before the Reichstag in Berlin, to demonstrate against the Industrial Councils Bill, which was being debated within. Suddenly fire began. Some said that the first shots came from demonstrators on the Bismarck Monument (seen in the centre of our photograph); others, from windows of houses overlooking the scene. The foremost demonstrators tried to rush the building, where Civic Guards were posted on the steps. There were cries of "Down with Noske's men!"

Several machine-guns were brought out from the Reichstag and a volley was fired, causing a general panic. The crowd then gradually dispersed. The number of killed was officially stated as 22, including 2 members of the Civic Guard. Ten soldiers were wounded. A Reuter message estimated the killed at 50 and the injured at 100. Within the Reichstag a tumult arose. The sitting was suspended, and President Ebert proclaimed a state of siege.

PHOTOGRAPH BY SENNECKE, BERLIN.

BOOKS OF THE DAY

By E. B. OSBORN.

I HAVE been using novels as bed-books in the holiday weeks, reading myself to sleep with most of them in a surprisingly short time. The most cunningly-camouflaged example of the canned fiction of commerce, which is still strangely abundant, cannot detain me from touching a button and turning on the dark for longer than is required to ascertain whether the young lovers in the first chapter get married or, being married, are reconciled in the last, or whether the old triangle or new polygon (the figure has as many as five sides in these latter days) works out in the approved mechanical style. Only three out of twenty-odd kept me agitating my grey matter (not being Mr. Gosse or a goose, I must use the King's slang at times) for an hour and more. One of the three was "THE EMBLEMS OF FIDELITY" (Eveleigh Nash; 6s. net) by James Lane Allen, which has a new plot and is written in the form of letters, a list of characters defined in a phrase, such as one gets in old plays, being submitted by way of introduction. A "rising young American novelist" agrees to the request of a "famous elderly English novelist" to send him some Kentucky ferns, and the stupidity of various florists prevents the agreement being carried out and causes an intolerable deal of trouble of all kinds on both sides of the Atlantic. Out of so small an affair vexation issues in swift strange convolutions like the serpent out of the Pharaoh's egg of my boyhood (and yours



AUTHOR OF "THE MYSTERY OF EASTER ISLAND": MRS. SCORESBY ROUTLEDGE.

Mrs. Routledge's new book, "The Mystery of Easter Island" (Sifton, Praed and Co.), is one of absorbing interest. It gives a full account, lavishly illustrated, of the expedition conducted by herself and her husband, and their study of the wonderful carved figures whose origin constitutes the mystery of this lonely island in the south-east Pacific, a mystery which has long baffled anthropologists.



"THE HANDS WERE QUITE SHARP AND UNWEATHERED": A HUGE RECLINING STATUE EXCAVATED ON EASTER ISLAND.

From "The Mystery of Easter Island," by Mrs. Scoresby Routledge (Sifton, Praed and Co.), by courtesy of the author.

too, I hope). Tilly Snowden and Polly Boles, both described as "dangerous sweethearts" on the playbill, are subtle types of womanhood, and they certainly live up to the description. "INTERIM" (Duckworth; 7s. net), by Dorothy M. Richardson, was described to me as a wicked case of literary Bolshevism, and that fell warning—by the most learned critic of the novel I know—together with the phonographed talk and many dashes on the first few pages, caused me to fight shy of it night after night. But it is an amazing piece of ultra-modern analysis of sub-motives and the

subtest emotions of the subter-woman which has yet been written outside the Slav universe. It will give Freud a bad pain in his umbilical ego and elsewhere, in spite of the fact that he has been dead some time. It kept me awake thinking hard—and *feeling* hard—until the grey light of a rainy, tearful dawning came flooding in. The next night was more joyous, for it was then I read "THE GESTE OF DUKE JOCELYN" (Sampson Low, Marston and Co.; 7s. net), by Jeffery Farnol, a romance in verse and prose written to please the novelist's daughter, to whom he dedicates it in verses of humorous adoration:

My Gillian, thou child that budding woman art
For whom to-day and yesterday lie far apart.

I have that very kind of daughter myself, and she is rejoicing, as I rejoiced, over Benedicta and Yolande, the two dear, fair, love-lorn morning heroines of Mr. Farnol's romance in the merry greenwood.

"ESSAYS ON POETRY" (Fisher Unwin; 5s. net), by George O'Neill, S.J., M.A., is the most suggestive book of criticism I have read for some time. In "Poetry and the Reverse," a series of five brief papers for students, Father O'Neill attempts the impossible task of finding a final definition of what poetry is. The best he can do is: "Poetry is the language of passion and imagination expressing themselves under control of the laws of beauty." I much prefer to this painstaking effort the casual saying of a young Georgian poet in an after-dinner conversation (lifted out of the plane of commonplace criticism by a bottle of the blushing and generous Burgundy that is so hard to come by in London nowadays) that a true poem is "a patterned ecstasy." Indeed, the old far-away definition by Matthew Arnold of poetry as "a criticism of life" is preferable, if only because it enables you to define the work of "minor" poets succinctly and sufficiently as a criticism of—other people's poetry! All other definitions ignore that vital relation of the art of poetry to the art of living, which Byron was thinking of when he wrote to the John Murray of his period: "So far are principles of poetry from being invariable, that they never were nor will be settled. These principles mean nothing more than the predilections of a particular age."

In his four remaining essays Father O'Neill anatomises and appreciates four poets, Aubrey de Vere, William Allingham, Thomas Boyd, and Gerard Hopkins, of whom the last two are unknown to most lovers of English poetry. Next to Ferguson, the author of the Aeschylean ballad of the Welshmen of Tirawley (to my mind the greatest thing in all Anglo-Irish literature), Thomas Boyd has more of the *os magna sonaturum* and the *mens divinor* than any other Irish-born poet. His "Bull of Cuailgne" rivals the Leviathan and Behemoth of Job's tremendous poem and is far more majestic in its strength than Leconte de Lisle's basking hippopotami and Andean condors. But I cannot bring myself to stand in breathless admiration, as Father O'Neill and Dr. Bridges do, before the obscure and perplexed pages of Gerard Hopkins, whose verse—like some of Meredith's—has to be decoded before a simple soul can find a meaning in its not unmusical vicissitudes. The packed significance of synthetic speech (he was as great a Greek scholar as Balliol ever produced, according to Jowett, and Greek enters into the very soul of his English verse) and the Celtic mania for assonances like the chiming of little dead bells are combined in such undecipherable passages as the following—

Let life, waned, oh, let life wind
Off her once skeined stained veined
variety
Upon, all on two spools; part,
pen, pack
Now her all in two flocks, two
folds—black
White; right, wrong; reckon but,
reck but, mind
But these two . . .

It is impossible to tolerate his "derangements of epitaphs" and topsy-turvydoms of grammar. His constant efforts to build up English compounds on Greek lines (which

produces such monstrosities as "fallow-bootfellow" and "wind-lilylocks-laced") rarely become as tolerable as in this picture of his beloved and ever-longed-for Oxford—

Towering city and branching between towers
Cuckoo-echoing, bell-swarm'd, lark-charmed, rook-racked,
river-bounded.

How can our Poet-Laureate dare to describe such tangle-stuff as "plumage of far wonder and heavenward flight"? He is a true poet, to be sure, when his emotion runs clear in his discussion of "why sadness dwells on mermaids." But, since the veins of gold in his tumbled ore-piles are so meagre and tortuous, I for one refuse to regard him as more than a puzzled experimentalist.

We have not as yet an adequate anthology of Twentieth-century English verse—I suppose somebody



A BIRD-MAN IN LOW RELIEF HOLDING AN EGG: A CARVED STONE EXHUMED AT ORONGO.

"The figure may have represented one of the egg gods, but it seems more probable that each one was a memorial to a bird-man, and this presumption is strengthened by the fact that in at least three of the carvings the hand is holding an egg."

From "The Mystery of Easter Island," by Mrs. Scoresby Routledge (Sifton, Praed and Co.), by courtesy of the author.

will call it "The Silver Treasury," when it does appear. Meanwhile "A MISCELLANY OF POETRY, 1919" (Cecil Palmer and Hayward; 5s. net), edited by W. Kean Seymour, is a truly catholic collection, ranging through the whole gamut of ultra-modern verse from Mr. G. K. Chesterton's ironical "Elegy in a County Churchyard" to Miss Edith Sitwell's "Solo for Ear-Trumpet." Until, if ever, a full and complete anthology appears, you have only to read this collection to be able to box the compass of the modernity that laughs and cries, is Miltonic and music-hally, chimes and chuckles, in an arm-chair and one rainy evening. Finally, "THE GOLDEN TREASURY OF MAGAZINE VERSE" (Harrap; 5s. net) is worth studying for a few moments.



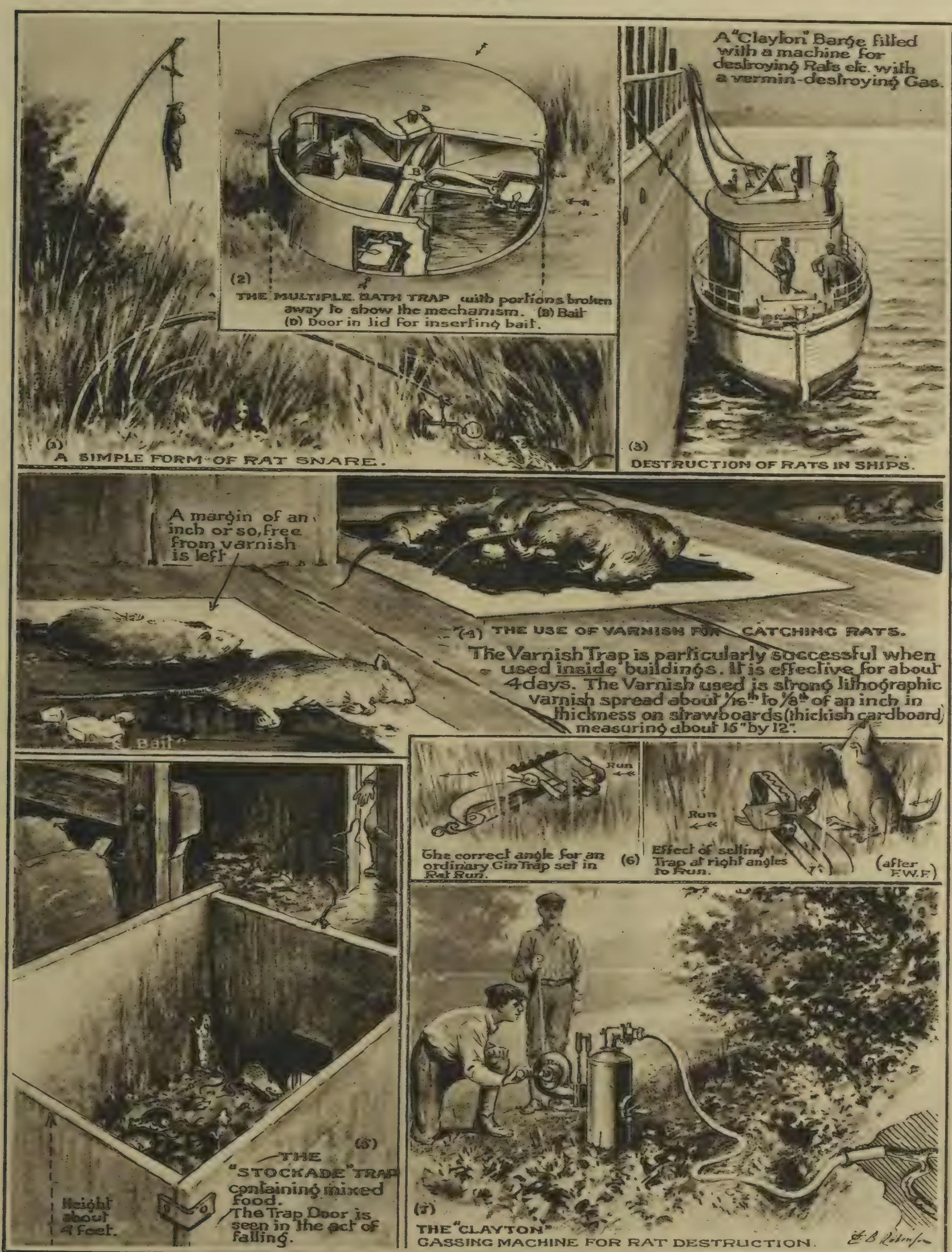
CARVED WITH FIGURES OF BIRD-MEN: A ROCK AT ORONGO WITH A SCULPTURED SURFACE MEASURING 6 FT. BY 5 FT.

"On the rocks which terminate the settlement of Orongo the most numerous of the carvings is the figure of a man with the head of a bird . . . at every size and angle . . . It can still be counted 111 times: all knowledge of its meaning is lost."

From "The Mystery of Easter Island," by Mrs. Scoresby Routledge (Sifton, Praed and Co.), by courtesy of the author.

PLAQUE-BEARERS THAT EAT FOOD WORTH MILLIONS: WAR ON RATS.

DRAWN BY W. B. ROBINSON FROM MATERIAL SUPPLIED BY DR. W. J. HOWARTH, MR. E. G. BOULENGER, F.Z.S., THE CLAYTON FIRE EXTINGUISHING AND DISINFECTING CO., AND THE BOARD OF AGRICULTURE'S REPORT ON RATS.



VERMIN THAT DEVOURED £15,000,000 WORTH OF FOOD A YEAR DURING THE WAR: RATS—AND THEIR DESTRUCTION.

The rat is a plague-carrier. "During the war," said the "Times" when the first national rat week began last autumn, "vast quantities of foodstuffs were devoured by rats. The total annual loss was estimated at £15,000,000. . . . Moreover, the rat population grew by what it fed on." Nor is it only on land that the rat is a menace. Mr. T. A. Clayton, of the company which makes the well-known Clayton rat-gassing machines (illustrated above) wrote at the same time: "200 rats is a very moderate estimate of the average number on board an ocean-going steamer. On these steamers

rats are costing someone £2 10s. a day, £75 a month, £900 a year, for what they actually eat. . . . Few shipowners realise the importance of the economic question involved." The Clayton system kills rats, with their parasites, their nests and young, very effectively by sulphurous gas. Dr. W. J. Howarth, Medical Officer for the City of London, devised the varnish trap for the interior of buildings. Other methods are described in the Board of Agriculture's Report on Rats, and in that on experiments at the "Zoo," by Mr. E. G. Boulenger, F.Z.S.—[Copyrighted in the United States and Canada.]

LIFE ON THE MOON? A NEW THEORY OF VEGETATION

THE FOUR LARGE PHOTOGRAPHS BY F. SELLERS IN THE ROYAL PHOTOGRAPHIC SOCIETY'S



SHOWING THE LUNAR APENNINES (AT WHOSE EASTERN END IS THE CRATER OF ERATOSTHENES), WITH THOSE OF COPERNICUS AND PLATO: THE MOON'S SURFACE.



THE METEORIC THEORY OF CRATERS: A "MOON-MOUNTAIN" MADE BY DROPPING A STONE ON TO MORTAR.

THE corpse-like pallor of the moon harmonises well with the assurances which astronomers have given us that the belief in the existence of the "man in the moon" is a belief without warranty. More than this they have assured us, almost unanimously, that not even the simplest conceivable form of life could exist there. For there is no atmosphere, neither seas, nor lakes, nor running water. No clouds ever conceal its details, no mists soften

the harsh outlines of its towering mountains. During the 354 hours of its long day the sun beats down with full force upon its barren surface, and during its equally long night that surface is exposed to the cold of outer space.

Life, under such conditions, would be impossible. Nor is there any reason for supposing that there ever was a time when it existed there. Nevertheless, there have been astronomers in the past who have gone so far as to talk of vegetation there, and this view has just been revived by Prof. Pickering, who contends that he has warrant for believing that vegetation can be seen in the vast crater of Eratosthenes, which is 38 miles in diameter, and forms the eastern termination of the lunar Apennines. He describes it as grey, like our sage-bush and some of our cactuses.

Vegetation to be visible at such a distance from our earth must be luxuriant indeed, and this implies plants of an organisation at least as complex as our trees. But let us assume that this is an over-statement, and that what is seen is no more than a great sheet of some lowly algae. How could it have come into being under the physical conditions obtaining in the moon? How and when life first appeared upon our own earth is a matter upon which we can only speculate; and we must assume that, if there be life in the moon, it arose under like conditions. We assume, then, that life on the earth began at a time when the atmosphere was denser than now, and laden with carbon dioxide, and thick with water vapour; while the temperature was warm and moist and almost uniform the year round. Under such conditions there may have been evolved a vase-like jelly, rich in compounds of nitrogen, chlorine, and phosphorus, which cannot exist in the atmosphere of to-day. Once started, adaptations to an environment affording infinite possibilities brought about ever-increasing complexities of development, and the ultimate evolution of animals and plants. The astronomers have shown us that no such conditions for the birth and support of life obtain in the moon to-day. And there is nothing to show that such conditions existed in the past.

But, even so, the non-existence of such conditions need not rule out all possibility of the appearance of life on the moon. The late Lord Kelvin maintained that life may have come to our earth as a spore, born by a meteorite from some other world. This is conceivable, for spores may retain their vitality for very long periods, and can survive exposure to intense cold. Hence, as Prof. Gregory has remarked, if a world were shattered by the disruptive approach of another heavenly body, some of the fragments might carry with them germs which might retain their vitality even during a long journey through the intense cold of outer space. The most serious danger to the germ would be that of being burnt when the meteorite became heated by friction with the earth's atmosphere. But if the spore lay deep in a crack, it might remain quite cold, although the surface of the meteorite were rendered white hot: for the heat due to the friction

(Continued opposite)

THE ONLY "RING-MOUNTAIN" ON THE MOON VISIBLE BY THE NAKED EYE: THE MARE CRISUM (ON THE EDGE IN THE LEFT CENTRE) AT SUNSET.

The perennial interest of the Moon as an object of scientific study has just been stimulated by new ideas. Prof. W. H. Pickering's observations (criticised by Mr. Pycraft above) suggest that there may be life on the Moon in the form of vegetation. Some of the craters, or ring-mountains (whose total number has been variously estimated from 100,000 to 200,000) have shown changes. Thus in the large crater called Plato, 60 miles in diameter, some of the 30 or 40 little cones dotted over it have altered in prominence in recent years, some practically disappearing. Still more, the crater Eratosthenes (38 miles in diameter), at the eastern end of the lunar Apennines, has been seen to grow darker during the lunar day (which is as long as 15 of our days), and this darkening is attributed by Prof. Pickering to the rapid growth of vegetation. He has also observed in Eratosthenes several systems of canals, like the canals on Mars, which are not supposed to contain water, but to be due to the spread of vegetation. It is not believed that such markings indicate intelligent life on the Moon, but that "she may not be quite dead at present." Vegetation would indicate water, which could not, however, be in a liquid state, but in the form of snow or hoar frost. Prof. Pickering believes he has

AND CANALS IN THE CRATER OF ERATOSTHENES.

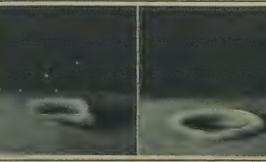
CURATION: OTHER PHOTOGRAPHS AND DIAGRAMS BY BRUNO H. BURGESS.



THE BURSTING BUBBLE THEORY: A "RING-MOUNTAIN" FORMED BY VAPOUR FROM BELOW BREAKING THE CRUST OF CHALKY PULP.



THE METEORIC THEORY OF CRATER-FORMATION ON THE INTO A MASS OF PULP AND



MOON: CINEMATOGRAPH FILMS OF A SHOT FALLING FORMING A "RING-MOUNTAIN."

THE LAVA EBB AND FLOW THEORY: A "RING-MOUNTAIN" MADE BY FLUID METAL WELLING UP THROUGH A HOLE IN A PLATE.

THE VOLCANIC ACTION THEORY: A RAMPART BEING BUILT UP BY THE FIERY MASS EJECTED. *(Continued)*

with the atmosphere would be sufficient to fuse in more than 5 very thin surface of a large meteorite. The interior would remain intensely cold.

Again Prof. Svante Arrhenius holds that living matter could pass from star to star without the intervention of a meteorite to serve as a ferry. He claims that some of the smallest spores could be carried, at a comparatively high speed, from one world to another, by "light pressure." The impact of rays of light falling upon a thin body presses it backward; and this pressure, according to his theory, would be sufficient to drive it through the atmosphere; and so on to some distant sphere. Neither of these theories commends itself to biologists. They are, to say the least, far-fetched. And, furthermore, such alien germs would bring with them inherited growth-tendencies which would be out of harmony with the conditions of existence imposed by our earth. Hence they would not survive their transportation. But let us suppose that life had been introduced on to the surface of the moon by a meteorite—for it is suggested that the remarkable craters of the moon, such as are shown in our illustrations, have been caused by the bombardment of meteorites—as the harsh conditions of existence such germs would encounter would render survival impossible.

Life, as we know it, is inhibited by intense cold. For its sustenance it requires a temperature above the freezing-point; though algae will grow upon snow, as for example, *Sphaerula niveis*, which produces "red snow" in Alpine regions. But the conditions of life obtaining here are very different from such as obtain on the surface of the moon.

Prof. Pickering's chief reasons, it would seem, for the assumption of life on the moon are based on the appearance of markings in Eratosthenes which recall the so-called "canals" in Mars. These are now held not to contain water—as they were first supposed to do—but to be due to the spread of vegetation in sharply defined directions. The canals, we are told, originate, usually, in a dark spot—a sort of centre of vegetation—and run independently of the nature of the lunar surface. Moreover, they undergo frequent changes of direction and density, depending, apparently, on the lunar day. But these phenomena surely afford but slight reason for the assumption that they are due to living organisms. And why, one is tempted to ask, are these supposed signs of vegetation confined to the crater of Eratosthenes? The floor of the crater of Plato is an almost uniformly level plain, 60 miles in diameter, but dotted over with 30 or 40 relatively tiny cones which, during recent years, have been found to alter in prominence. Some even have practically disappeared, while others have increased in volume, but nowhere on this extensive area does any suggestion of vegetation seem to have been noticed. It is to be hoped that presently the conspicuous differences between the two areas will be explained.

Lacking an atmosphere, rain, and standing water, and without "soil," to say nothing of other adverse factors, there seems little justification for belief in the existence of life in our satellite; and we venture to suspect that Prof. Pickering himself, and other astronomers who have held, and may hold, similar views, in the not distant future will come over to the side of the biologists.

W. P. PYCRAFT.

observed the condensation of water vapour round crater peaks and rims. The formation of the Moon's craters (so different from Earth's mountains) has been explained by various theories illustrated above by experiments. One is that they may have been formed by gigantic meteors falling on the Moon while its surface was viscous. Another suggests that hot vapours from within burst through the crust, creating "bubbles" similar to those formed on the surface of a chalky pulp heated from below. A third hypothesis explains that lava broke through fissures in the Moon's crust, rose up and then flowed back again (thus demonstrating the lunar control of ebb and flow of our tides), like molten metal welling up at intervals through a hole in a horizontal plate. A fourth suggestion is that the craters were formed like terrestrial volcanoes. The large photograph in the left top corner shows the lunar Apennines (at the eastern end of which is the crater of Eratosthenes), Copernicus, the large crater near the right-hand top corner, and Plato, the large oval in the centre near the bottom. In the large photograph in the lower right-hand corner, Clavius is the big ring-mountain, partly in shadow, near the right-hand top corner. Tycho is a smaller one, well defined, a little distance vertically below it.



SHOWING SOME OF THE THOUSANDS OF CRATERS WHOSE FORMATION IS EXPLAINED BY VARIOUS THEORIES: THE CENTRAL REGION OF THE MOON'S SURFACE.



SHOWING THE CRATERS, OR RING-MOUNTAINS, OF CLAVIUS AND TYCHO: THE RUGGED SOUTH POLAR REGIONS OF THE MOON.

AN ANTELOPE THAT WHISTLES WHEN ALARMED: THE ORIBI AT HOME.

PHOTOGRAPH BY F. RUSSELL ROBERTS.



FOUND EITHER SINGLY OR IN PAIRS: AN ORIBI—A SMALL ANTELOPE, DISTRIBUTED OVER AFRICA IN VARIOUS LOCAL FORMS.

The photographer of African game in its native haunts has a very difficult task. Sometimes it is the size and ferocity of the "sitters" that causes the difficulty, as well as great danger, of the work, as in the cases of the elephants, hippopotamus, and rhinoceros, of which remarkable photographs by Mr. Russell Roberts have appeared in our recent issues. In other cases, on the contrary, it is the creature's extreme timidity which makes approach difficult. This is true of the Oribi, of which Mr. Russell Roberts says: "This

little antelope, which is distributed over Africa in various local forms, is an inhabitant of thin bush country. It goes singly or in pairs. When alarmed it utters a shrill whistle, and races off at full speed, covering the ground with great bounds. It is remarkable for three physical characteristics—a bald patch of black skin below the ears; an exaggerated face-gland which exudes an evil-smelling black fluid; and tufts of long hair on the knees."

The Combination of Excellence and Economy in Car Production.

THESE are certain aspects connected with the problem of motor-car production which have what one may term a national character. No longer is the manufacturing programme of a large firm merely a question for the shareholders and management of such a corporation. It is recognised that there are vast world markets in addition to the ever-increasing home demand. It is obvious that Britain's share in such foreign markets has a direct bearing on national prosperity, increased employment at home, and even the prestige of Britain in foreign climes. The motor industry of the United States is the fourth largest industry of that country: it is stated by some authorities to be the third. Their cars are exported to every quarter of the globe, and an industry of such magnitude has obviously an important bearing on the commercial prosperity of the nation.

SCOPE FOR BRITAIN.

Hitherto Britain's share in the world production of motor-cars has been more definitely associated with quality than quantity. So long as the excellence of the product is not sacrificed, one may postulate as a premise that the lower the cost the greater the market. The deduction to be drawn from this line of thought is apparent. To increase the markets, and therefore the magnitude of the industry, it is necessary to bring into being a perfected combination of these two essential attributes—respectively, excellence and economy. At first sight, and on superficial considerations, it appears that this combination is impracticable. Let us, therefore, take the two questions separately and see if they cannot be interwoven in practical application so as to give the result which we have postulated as the ideal.

DEGREES OF EXCELLENCE.

In the production of motor-cars there are certain definite facts in regard to the question of excellence. They are not questions of opinion, but are actual facts based on, and

high-grade material and the highest grade material is mainly governed by the reputation which the manufacturer has to sustain. It is an adage in commercial matters that the quality of the product is the base of the goodwill attached to its manufacturer, and that such goodwill is a business asset of immense value. All the firms producing units for the Angus-Sanderson car, have long-standing reputations to maintain, which would make it definitely unsound as a business proposition

tools, jigs, etc., over a large number instead of over a small number. Precisely the same state of affairs obtains in regard to the production of the various transmission units by Messrs. E. G. Wrigley and Co., Ltd., of Birmingham. Here again, high reputation for excellence of material and workmanship is an asset of prime importance to the company, and the same economy of specialisation obtains. The selfsame series of economic considerations obtains throughout the chassis, frame, electrical equipment, wheels, tyres, and last but not least, coachwork—all are in the hands of firms of the highest repute. The coachwork and erecting are in the hands of Messrs. Sir Wm. Angus, Sanderson and Co., Ltd., whose exploit in speeding up the manufacture of aeroplanes during the war led to an official request from the authorities to study their processes. Precisely the same principles of embodying highest grade production with speed and economy, obtain in the manufacture of the Angus-Sanderson car.

THE RESULT—AND THE FUTURE.

The result is a car of remarkable quality, reliability, and general achievement, at a most emphatically moderate cost. The whole of the technical and lay Press of the country has appraised it highly. This in itself is remarkable. It is even more remarkable that the leading motor experts—closely allied with the practical performances of cars since the inception of motoring in this country—are the most pronounced in their opinions. For example, Mr. S. F. Edge, in the "Auto," bestowed a measure of praise which left no room for doubt. Again, Captain W. Gordon Aston, speaks in equally happy vein in "Irish Field." Yet another leading expert of exceptional experience—Captain E. de Normanville—is, in the "Daily Express," no less definite in appraising the road performances of the Angus-Sanderson car.

The new factory at Birtley, near Newcastle, has already achieved an output of cars which in pre-war days would have been phenomenal



to employ anything other than the highest grade material.

THE QUESTION OF ECONOMY.

So far as the consideration of Workmanship is concerned, it is an accepted fact that when a large quantity of a given article is to be produced it is no more expensive to work to, say, one-thousandth part of an inch, than to work to, say, one-ten-thousandth of an inch. A large number of expensive jigs and gauges have to be made to tackle the manufacturing problem on a sound basis, and these can be as readily set to the one dimension as to the other. The up-to-date engineering plant makes little demand on hand-finish in quantity production jobs.

It is well known that the Angus-Sanderson car is produced by a number of specialists, each of whom is responsible only for the specific item manufactured. Take, for example, the engine, which is manufactured by Messrs. J. Tylor and Co., Ltd., of King's Cross and New Southgate. This firm is concerned with nothing beyond the production of motor-car engines. The value of their whole experience is concentrated in this one direction. In the case of management and organisation, designers, mechanics and plant, there is a definite series of specialists. Not only is excellence thus assured, but also economy of production. It is more or less obvious that when a large number of engines is being manufactured, economy is occasioned alike in the purchase of the necessary materials, and by spreading the cost of special machinery,



proved by, the collective experience of manufacturers throughout the world. There are, for example, certain degrees of excellence, with limits in both directions. Whilst there is a measure of scope for variation in regard to material, there is very little in relation to workmanship. The collective experience of all manufacturers tends to prove that high-grade material runs concurrently with ultimate economy. As a consequence we find some of the better inexpensive cars embodying high-grade material throughout their construction. The choice between the use of

**Sir Wm. Angus,
Sanderson & Co
Limited**

BIRTLEY - - - DURHAM.

PANORAMIC VIEW OF THE EXTENSIVE ANGUS-SANDERSON WORKS AT BIRTLEY.

for a British manufacturer. The manufacture of cars on mass-production principles is already an actual fact under standard working conditions, open to the inspection of anyone so minded. The basis on which this ideal of excellence and economy is built, is sound in principle and proved in practice. The limitations to development at present in being on account of the moulders' strike are only temporary. When the retarding effect of that trouble is removed, manufacture in accordance with the intended schedule of the Company will proceed undisturbed.



THE WORLD OF FLIGHT

SUPPLY AND DEMAND IN THE AIRCRAFT INDUSTRY.

By C. G. GREY,

Editor of "The Aeroplane."

IN that serial correspondence to which one has referred recently as running in the *Times* newspaper of late on "Our Air Policy," Mr. Holt Thomas in particular has raised a number of interesting points. Possibly it is not in accord with journalistic custom to write in one paper of a discussion in another, but, the *Times* being rather an institution than an ordinary newspaper, and *The Illustrated London News* being equally an Imperial asset, perhaps one may be excused for departing from the custom. Therefore one wishes particularly to draw attention to a question asked by Mr. Holt Thomas in one of his letters—namely: "How long can our aircraft-designing departments, which are so expensive to maintain, go on designing aeroplanes for which there is no demand?" The question is one which deserves very grave consideration, for on our continual advance in design depends the efficiency and the effectiveness—two very different things—of our Air Force in the future. The obvious answer is, "Make a demand for aircraft." On which, of course, people will naturally ask: "How is a demand to be made?"

Mr. Holt Thomas's reply to that question is that if the British Government and the various Governments of the Overseas Dominions would set to work at once and organise aerial mail services throughout the British Empire, a big demand for postal aeroplanes would follow within reasonable time, and so those firms which are capable of designing new and improved types of aeroplanes would be able to keep their designing departments busy. Undoubtedly he is right in arguing on these lines. As he says, the Aircraft Industry does not want charity. It is prepared to give the very fullest value in the form of services rendered. Already British aircraft, British pilots, and British air-mechanics are recognised all over the world as the best of their respective kinds. It is essential to our existence as an Empire that we should maintain an adequate supply of all three, and that they should all progress with the times. It is as necessary that pilots should be used to flying the latest aeroplanes, and that mechanics should be used to adjusting and caring for the latest machines and engines, as that our aeroplanes and engines themselves should keep ahead of those of other nations.

Therefore it is necessary to create a demand for men and machines alike. All of which raises that old question of supply and demand—does demand create supply or does supply create demand? The answer is simply "Both." Nobody wanted railways, or motor-cars, or telephones before such luxuries were invented. It was the supply in all cases which created the demand. If any new invention gives its owner an advantage over his competitors, then the supply of that invention will create a demand for it, provided always that it can be supplied at a price which makes its use a business proposition.

In the case of postal aeroplanes, Mr. Holt Thomas, Mr. Handley Page, and others have proved beyond question that they are a business proposition. As, for example, Mr. Holt Thomas's very simple statement that an air-mail letter of 4000 to 5000 words (that

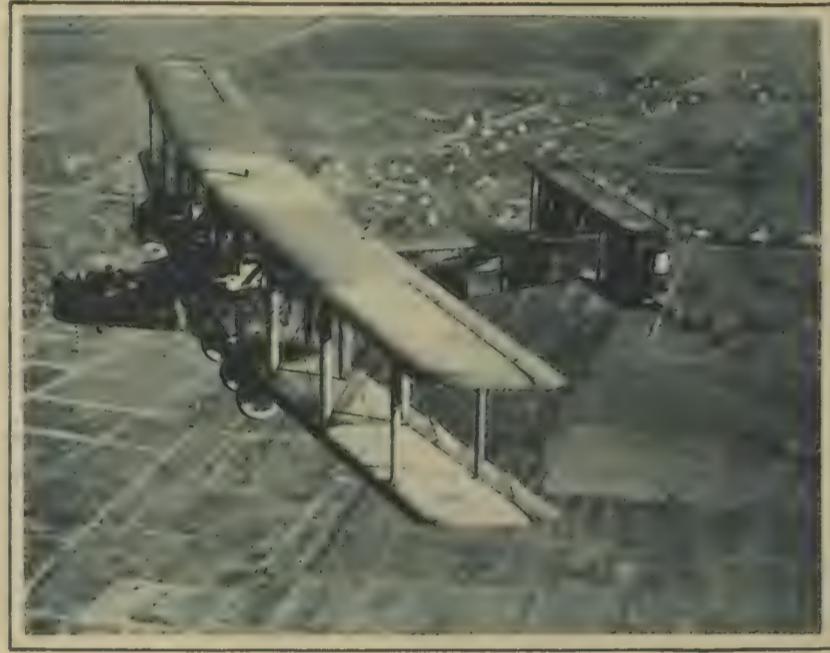
is to say a letter about three or four times as long as this article) can be conveyed from London to Paris in $\frac{1}{2}$ hours for half-a-crown, whereas by the next fastest mode of transport, the cablegram, only a few words can be transmitted for this price. One notes that Mr. Holt Thomas considerably omits to state that "the next fastest mode of transport, the cablegram," takes something well over 24 hours to reach its destination when travelling either way between London and Paris, judging by one's own recent experiences.

varying in length between 50 and 100 words. One scarcely feels inclined to pay 2s. 6d. apiece for these short letters, but one would willingly pay 6d. apiece, provided always that one could be assured that they would be delivered promptly at either end of the journey. That, however, is a matter to which the organisers of aerial transport and mail lines will have to give particular attention; especially as regards parcels traffic. The French Post Office is notoriously lax; in fact, any Frenchman will dilate at length on the inequities and delays of his postal services. There is little use in taking a letter from London to Paris in two hours—more or less—if the French Post Office takes 24 hours to deliver it from the aeroplane to the addressee.

Nor is there much object in a parcel travelling from London to Paris in an hour and a half—as did one dispatched recently—if the distributing agents in Paris fail to deliver it three days afterwards. Nevertheless, if these details of ground organisation are made thoroughly efficient, the supply of postal facilities will quickly create a huge demand.

One believes that there are many other ways in which supply can be made to create demand, by creating competition at the same time. For example, suppose a merchant at one of the great river ports of China does a big business with the country far up-river, and finds it necessary to visit or to send representatives to the up-river markets. If that merchant acquires a flying-boat with a competent pilot and a couple of skilled air-mechanics, he will immediately possess an advantage over his competitors. It will be as if he had a private railway to his markets while his competitors had to travel on horseback. As soon as he had scored over his competitors a few times, they, in turn, will insist on having flying-boats of their own, so as to compete with him. But the difficulty would be, of course, to sell the first flying-boat. Obviously the boat and its crew must go to China and demonstrate its capabilities before it can be sold. Which is to say that the supply must be there in order to create the demand. When the demand for more and more flying-boats arises, then the demand in turn will create the supply. Which is in strict accord with all the laws of economics.

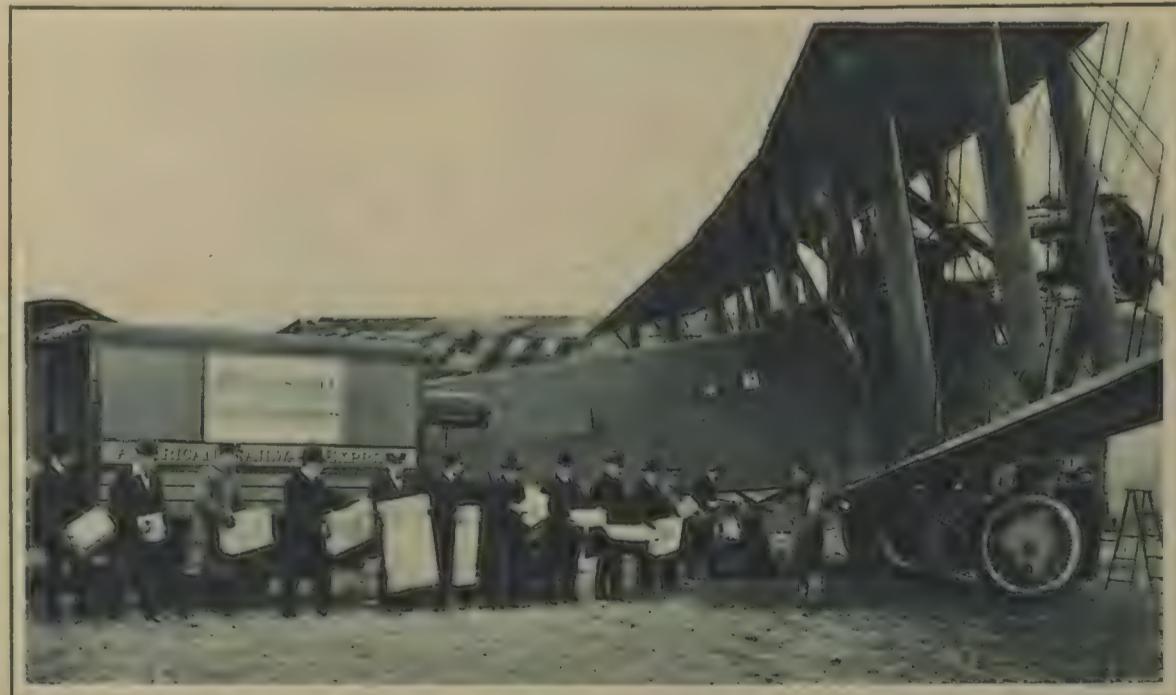
Precisely similar arguments apply to the development of aviation all over the world. The owner of big lumber property in Canada or the States who owns a flying-boat or a seaplane and sends his inspectors around at frequent intervals to visit the camps—which must of necessity be near a lake or river—will score an immense advantage over his competitors. The Argentine rancher who inspects his out-stations in a day or two by aeroplane instead of taking a fortnight or a month on horseback will have the more time to devote to his buying and selling. But in every case the benefits of the aircraft must be demonstrated on the spot. That is, the supply must create the demand. And when that demand is once created there will be no difficulty about maintaining a staff of designers who will supply newer and better types which in turn will create fresh demands. In aircraft, as in other things, *l'appétit vient en mangeant.*



BRITISH AVIATION ENTERPRISE IN THE UNITED STATES: A BIG FOUR-ENGINED HANDLEY-PAGE CARRYING MAILS BETWEEN NEW YORK AND CHICAGO—PHOTOGRAPHED IN THE AIR FROM ANOTHER MACHINE.

This Handley-Page machine is flying for the American Railway Express Company, to demonstrate to business men the possibilities of aeroplanes for commercial purposes.

Naturally the possibility of maintaining an air-mail service depends entirely on there being enough letters at half-a-crown each to guarantee a full load for the postal aeroplanes. And, personally, one believes that here again supply can be made to create demand; in that, though there are not many people who are so anxious about their French correspondence as to pay 2s. 6d. per letter, it would be possible to fill several



SHOWING ITS GREAT SIZE AND CARRYING CAPACITY: A CONSIGNMENT OF CARGO BEING PLACED IN THE HANDLEY-PAGE AEROPLANE WHICH CARRIED AIR MAILS FROM NEW YORK TO CHICAGO.

postal aeroplanes per day in each direction with letters at sixpence each. A sixpenny letter might be limited to half an ounce in weight, but at that price, one is told, it would pay quite well. And if the postal authorities supplied the public with postal facilities at that rate the demand would follow. Personally one does not want to write 4000-word letters to France, but one sends quite a number



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LADIES' NEWS.

THE Prince of Wales went down to Sandringham last week for some shooting and hunting. The weather was very variable, but the royal party were able to enjoy some excellent sport. The number of accidents in the hunting-field show that the going has been far from good. They happened to very seasoned riders to hounds. The King's daughter and sons have good seats, but what is most noticeable about their riding across country are their good hands and judgment. Teaching has been of the best, but in this sport natural aptitude and real love of it come before all instruction. The Prince of Wales is a true lover of horses, and a good horseman; up to now he has had no opportunity of enjoying that great British pleasure, a first-rate run. Even now the ground is too heavy for it to be at its best; the Prince, however, would have the advantage of being a light weight. Princess Mary proves herself a good and straight goer: not a thruster, but a good, judicious cross-country rider.

Among the many improvements promised by railway companies during the last fifteen years—most of them still unperformed—when is public safety in long runs to be secured by doing away with separate carriages? In such, any innocent, inoffensive, quiet passenger can be done to death, and the criminal leave the train without let or hindrance. Until this reform is general, it should be seen to by railway officials that no woman travels alone in one of these murder traps with an unknown man. Since many men of rough character whom the Army kept out of mischief are now at large, it is not very surprising that there should be an epidemic of crime. Therefore, more and more protective precautions should be taken by the public and by authorities for the safety and security of travellers from injury and robbery.

Fashion is going to have a complete turn round, so we are told by those who ought to know. Women are looking at their dear dresses, which they love because they have cost much and because they look well in them, and wondering what is to be their fate. Fashion's complete turns seldom allow of remodelling or reconstruction. There is an air of portentous mystery about the dictators of the modes, and about designers male and female. No doubt the inspiration for the coming models, which will begin to be shown next month, is being sought in the Louis Quatorze, Louis Quinze, and Louis Seize periods—quite a large field, from which smart designers should evolve many lovely frocks. The Watteau mode will be adapted delightfully,



AN ATTRACTIVE WRAP.

Moleskin alone is almost irresistible, but it becomes entirely so when a touch of ermine is added to it.

and hair-dressing after this style is being practised by experts, the coiffures Récamier being specially studied. As regards our feet, the care lavished upon their appearance during a long reign of short skirts will not be lost, for there is no sign of these skirts being greatly lengthened. Frills and furbelows will be ours once more. As to detail, that will be developed later. Although this period will be the chief inspiration of designers, the later Directoire fashions are also being exploited and famous pictures being studied with a view to adaptation. Of one thing we may be happily certain—the hideous, shapeless coat-frock of war-work days disappears into the limbo of the dowdy.

We are becoming accustomed to high prices with a little more cheerfulness, perhaps, than eels become accustomed to being skinned. One thing we pay for readily, because we like it so much, profit by it in health, and know it to be Britain's best, and that is St. Ivel Cheese and other St. Ivel productions. We can have them now in plenty, for the West Country warriors are back at their peaceful avocations and are making this fine lactic cheese again in pre-war quantity. One gets it quite easily from any stores. So one eats one's St. Ivel, and feels that war is over and peace and its blessings ours once more.

Everyone will be glad to know from so good an authority as the Countess of Warwick that Warwick Castle cannot be sold. It is an asset of our nation, historic, picturesque, and proud. The rumour that it was to be sold to an American syndicate to be used as an hotel sent cold shivers down British spines. Lady Warwick says it is possible that suites of rooms in the Castle may be run by an American syndicate for the accommodation of war-enriched Americans who are expected to swarm to this country in the immediate future, and whose thus swarming it is our duty to encourage.

There is one picture in Warwick Castle which is modern, but possesses a dramatic interest. It is that of the present Countess by Carolus Duran. During the sittings the Countess begged for one off to attend a great bazaar. The painter, however, was adamant; inspiration was strong upon him, and there was risk of the portrait being a failure if Lady Warwick did not keep her appointment. Too artistic herself to baulk an artist, she kept it; the bazaar was the scene of that tragic fire which is remembered with a shudder even in war-scarred Paris to-day. The stall at which Lady Warwick wanted to help was in the fiercest part, and two of the ladies at it were burnt to death. The picture was a success, and saved the sitter's life as well.

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We feel sure that the thoughtful public will appreciate the foresight which has enabled us, in one of the necessities of modern life, to live up to the highest traditions of our industry.



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AN AUSTRIAN TRUTH-TELLER.

OF all books about the war produced by the leading soldiers and statesmen of the Central Powers, Count Czernin's "In the World War" (Cassell) strikes us as being the best-written and also the most engrossing, by reason of its superior interest of the personal kind. The German Chancellor and Generals write like special pleaders aiming at the making out of a case; while the Count tells his story more like a detached philosopher and passionless historian. His work has an air of sincerity and truthfulness, while his personal criticisms are singularly courageous and incisive. As Foreign Minister of the Dual Monarchy during the war, or the greater part of it at least, he was thus brought into contact with all its chief actors, military and political, in the Central Monarchies. He flatters none and spares none—not even the Archduke Franz Ferdinand, the victim of Sarajevo, whose assassination was the *causa causans* of the war, though the Count reasons very plausibly that it really was not due to any one particular cause or person, but rather the resultant of various forces which for long had been operating in the same direction.

Of the ex-Kaiser Count Czernin draws an almost flattering portrait much more so than that of the young Austrian Emperor Charles, whom he certainly does not spare, but paints him with all his warts. "The Emperor Charles," he says, "though full of good intentions, was devoid of all political training and experience, and ought to have been brought up to understand the principles of the constitution. . . . In his case too the atmosphere that surrounded him rendered it impossible to convince him of the brutal realities prevailing. On one occasion, when back from the front, I had a long

conversation with him. I reproached him for some act of administration, and asserted that not only on me, but on the whole Monarchy, his action had made a most unfavourable impression. I told him in the course of conversation that he must remember how, when he came to the throne, the whole Monarchy had looked to him with

remarked, when looking at his grave, "Here lies one who never feared the face of clay."

Count Czernin's portraiture, too, of the murdered Archduke Franz Ferdinand—"who had a great dislike of the Germans" is frank, fair, convincing, and of most particular interest—a portrait which proves how gross were the popular misconceptions of the murdered Prince's character when he was alive. To him, too, Count Czernin never feared to speak his mind. "No one can deny his great faults. Though the circumstances of his death were so tragic, it may well be that for him it was a blessing." Once at rose-scented Konopischt, in Bohemia, "we had a scene one evening after dinner, because he said 'I always worked in opposition to him and rewarded his friendship with treachery.' I broke off the conversation, remarking that, if he could say such things, any further serious conversation would be impossible, and I also stated my intention of leaving the next morning. We separated without saying good-night to each other." But next morning, when the Count was still in bed, the Archduke appeared in his room and asked to be forgiven for what he had said to him the previous evening. Such are a few personal touches from a narrative the best of its kind.

Mr. Edwin W. Streeter, the world-famous expert, has presented to the Goldsmiths' Hall, in London, his most interesting library dealing with the goldsmith's art, precious stones, pearls, and so on. Some of these works date from the seventeenth century, and give values, more especially of diamonds and pearls, at that period; while in

others are to be found values up to the present day. Mr. Streeter is anxious that this disposal of his books should be known, in order that offers from the United States may no longer be sent to him.

THE SHIP BEARING THE ALLIED NAVAL COMMISSION TO ENSURE THE CARRYING OUT OF THE NAVAL TERMS OF THE PEACE TREATY BY GERMANY: H.M.S. "MALAYA."

Vice-Admiral Sir Edward Charlton, the President, and the members of the Allied Naval Commission left Portsmouth for Kiel, in the "Malaya," on January 15, in order to ensure the carrying out by Germany of the naval terms of the Peace Treaty. The tour will last three weeks or a month, and will embrace Heligoland. The Commission will also visit Berlin. The "Malaya" flies the flags of the President and those of Rear-Admiral de Mesnil, of France, and Rear-Admiral Orsini, of Italy. Captain Sakonji represents the Japanese Navy.—[Photograph by C.N.]

great hopes, but that now he had lost eighty per cent. of his popularity"—a frankness which might have been envied even by John Knox in conversation with Mary Queen of Scots—Knox, of whom the Regent Morton

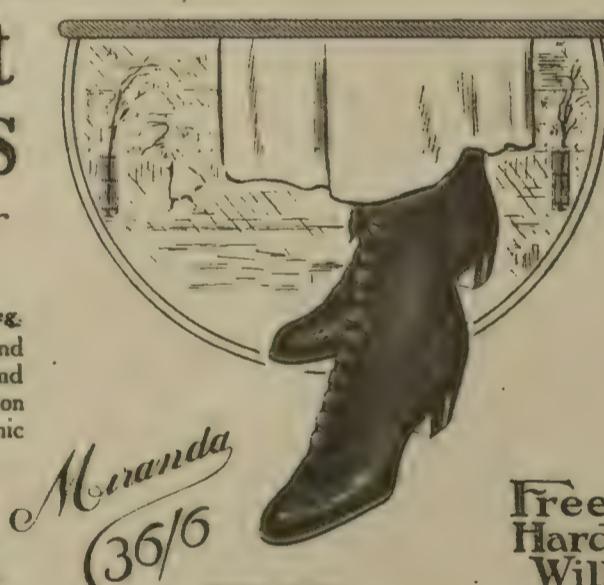
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STATE AID FOR MEDICAL SCIENCE.

WHETHER for good or ill, the Ministry of Health has come into being, and when its staff is completed it will, no doubt, after the manner of newly constituted Ministries, proceed to make itself felt by interference with the daily life of the citizens. Such interference may be beneficial or the contrary, according to the advice on which it acts; but the experience of other efforts of bureaucracy will prevent the wise from expecting much from it. In



ON HIS RETURN FROM THE UNITED STATES, ON LEAVE:
LORD GREY OF FALLODON.

Lord Grey of Fallodon reached England from the United States on January 13. Before leaving the ship, for London, he said: "I am officially coming home on leave to consult with the Prime Minister and Lord Curzon, and nothing will be said about my return to America until I have seen them." It will be noted that Lord Grey is able to discard his dark glasses.—[Photograph by S. and G.]

any case, democracy, which is guilty of much, cannot be held responsible for its failure, if this should come about, for the people have not in any way been consulted as to its formation.

It may be hoped, nevertheless, that before the new Ministry commits itself to any line of action it will consider whither it is likely to lead. That this is not always,

to put it mildly, the way of officials may be seen from the example of the Insurance Acts, which Dr. Bertram Baskett, in an address to the South Essex Division of the British Medical Association, charges with being the cause of the late increase of tuberculosis. It is a little difficult to follow the learned doctor's reasoning, because, as an apostle of Free Trade—he was, I believe, once Secretary of the Cobden Club—he finds it as impossible to keep tariffs out of the question as Mr. Dick did to exclude King Charles's head from his Memorial; but his argument seems to be that the Insurance Acts, by demanding fourpence a week from the much-enduring "working-man," caused poverty; and that poverty causes tuberculosis. With some part of this argument, which may be found at length in the *British Medical Journal* for Jan. 10, one is inclined to agree, for the Acts certainly were the cause of poverty in many a medical man; but, in that case, tuberculosis ought now to be vanishing from among us, since both medical and working man alike have profited by the war wages they have lately received; whereas it is rather on the increase than otherwise. The impotent Tariff Reformer might also point out that the real cause of tuberculosis was not the Insurance Acts, but the famous Budget which passed about the same time, with the Land Valuation legislation dependent upon it, which has entirely stopped the provision of small houses, and

has, therefore, brought about the overcrowding which is the real *causa causans* of the disease. For the rest, Dr. Baskett succeeded in persuading his audience, which promptly passed a unanimous resolution affirming his major premiss. One counsel which has lately been urged upon the Ministry seems to be a good deal more futile. A

joint Committee of the British Medical Association and the British Science Guild calls upon the Government to provide an annual sum of £20,000 to provide life pensions of from £500 to £1000 a year for such persons as shall have made discoveries in medical science. Yet they have only to read Macaulay's denunciation of a similar scheme for providing us with good literature to see how such a plan is bound to disappoint the expectations of its promoters. The medical man who can discover an effective way of treating any widespread disease can make (as a specialist) an income to which the pitiful £500 a year to be offered by the Government is as feathers; and the same may be said with even greater cogency of anything capable of being turned into a "patent" medicine. Nor would the proposed annuity offer the research student the means, often much needed, of bare subsistence while engaged on his researches. Every discovery of importance in this

[Continued overleaf.]



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On November 29 of last year, the National Skupstina of Montenegro deposed King Nicholas, and decided to reunite Montenegro with Serbia. On the 28th of the following month, a Ministry was formed at Belgrade, representing the Kingdoms of Serbia and Montenegro and the war-formed Yugo-Slav State, and the creation of a Greater Serbia was announced. The King of the Serbs, Croats, and Slovenes is Peter I., who was elected King of Serbia in 1903. The Prince Regent and Heir-Apparent is Prince Alexander. The new Kingdom includes Serbia, Montenegro, and Yugo-Slavia.—[Photograph by G.P.A.]

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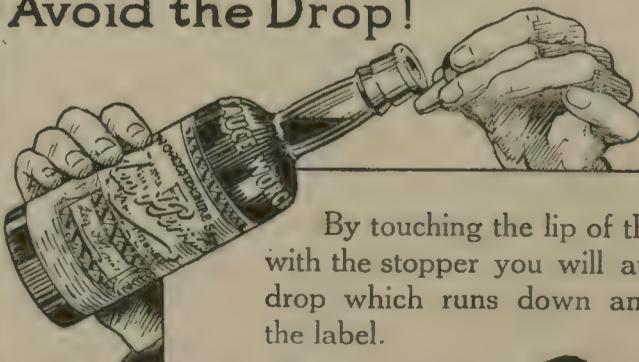
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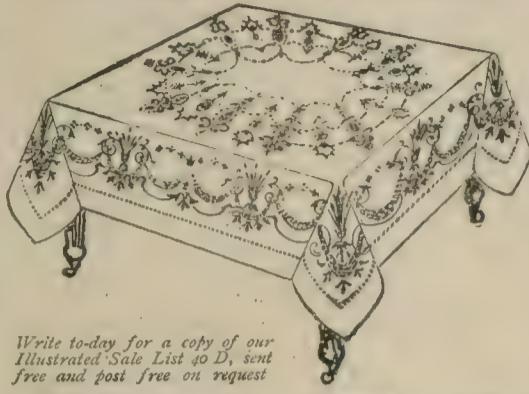


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Continued]

field is bound, while human nature remains as it is, to be hotly disputed on its first announcement, and has to pass through what is called its period of obloquy. While the grass is growing, the steed generally has to starve.

Yet there are needs which a paternal Government might easily supply which might really forward the advance of medical science. One is the provision of laboratories on something like the lines of the Davy-Faraday Laboratory of the Royal Institution, where the accredited student might work free, and without having to provide himself with expensive apparatus and a place to put it in. Another plan could be the provision of medical scholarships and exhibitions like the classical and mathematical ones open to County Council and other scholars, whereby those with a vocation for medicine, but not blessed with rich parents might provide themselves with their technical education. Post-graduate research in such subjects is also much in need of endowment, and this would have the advantage that the endowment would stop when the research did, whereas the life pension desired by the Joint Committee would not. If such a scheme were developed in the direction of what is called in the jargon of the day psychotherapy, or mind-healing, it might go far to rescue the subject from the quacks and faddists who have hitherto enjoyed the opportunity of exploiting it. But this, as Mr. Kipling says, is another story.

F. L.

"Debrett's Peerage, Baronetage, Knightage and Companionage" (Dean and Son) for 1920 is of exceptional importance and interest, in view of the enormous amount of fresh information it contains as the result of changes in succession and the bestowal of new titles and honours. "From an editorial point of view," writes Mr. Arthur Hesilridge in his preface, "the first year of Peace has been even more strenuous than any of the years of War. . . . In the course of the past year the new Honours conferred have reached the huge total of over 4000. . . . The number of changes of residence is truly phenomenal. The present issue shows an increase of 400 pages over those comprising the 1914 volume." The Roll of Honour, to which 230 names have been added since the last edition, is once more included. It contains now no fewer than 3150 names, or almost 10 per cent. of the total death roll of officers on all fronts—a splendid proof of the patriotism of the British nobility. Owing to casualties in the War, the succession to 231 hereditary dignities has either been precipitated or their normal descent changed. The number of heirs killed in action was 190. Many other points of interest are noted in the editorial preface.

CHESS.

To CORRESPONDENTS.—Communications for this department should be addressed to the Chess Editor, Milford Lane, Strand, W.C.

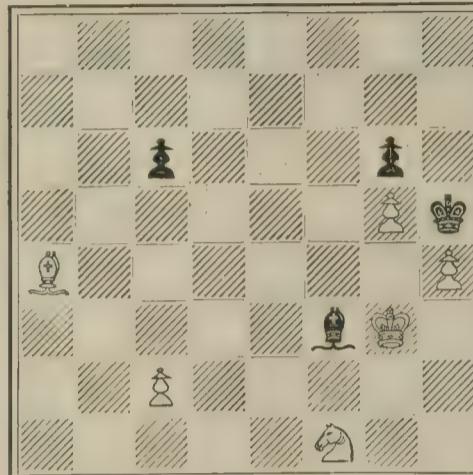
E M LANE (Clapham). In your last contribution how do you mate if Black replies with 1. Kt to B 2nd? Otherwise the composition is a very promising one.

CHARLES COTTIER (Montreux, Switzerland).—We fear your ingenuity has misled you with 3825. The White King is correctly placed at K 8th, and your solution as per your amended diagram is not the author's.

JOHN WATTS.—Yes, a problem is perfectly sound under the circumstances you mention. There is a school of purists who maintain that any move of Black, however futile, should require two moves to defeat it, but that opinion is not endorsed by the general consensus of composers.

PROBLEM No. 3828.—By W. LANGSTAFF.

BLACK.



WHITE.

White to play, and mate in three moves.

SOLUTION OF PROBLEM No. 3825.—By G. HEATHCOTE.

WHITE	BLACK
1. Kt to B 4th	P to Kt 7th
2. Q to Kt 3rd	P to Kt 8th (Queen)
3. Kt to K 6th mate	

If Black plays: 1. K to B 4th, 2. B to R 4th, etc.; if 1. K to B 6th, 2. B to K 4th (ch); and if 1. P to Kt 5th, then Q to Kt 3rd.

SOLUTION OF PROBLEM No. 3826.—By J. W. ABBOTT.

WHITE	BLACK
1. Kt to Kt sq	Kt to B 3rd
2. Kt to K 3rd	Any move
3. Kt or B mates	

If Black plays 1. P to Q 6th, then B to R 2nd (ch) etc.

CORRECT SOLUTION OF PROBLEM No. 3820 received from K D Ghose (New Delhi, India); of No. 3823 from H F Marker (Porbandar, India); of No. 3824 from R F Morris (Sherbrooke, Canada) and John F Wilkinson (Alexandria); of No. 3825 from J B Camara (Madeira) and M J F Crewell (Tulse Hill); of No. 3826 from Joseph Willcock (Southampton), A W Hamilton-Gell (Exeter), C H Watson (Masham), and H B (St. Leonards-on-Sea).

CORRECT SOLUTIONS OF PROBLEM No. 3827 received from H Grasset Baldwin (Farnham), J S Forbes (Brighton), J C Stackhouse (Torquay), C de W (Bexhill), G Kidd (Caichester), A H H (Bath), A W Hamilton-Gell (Exeter), A R Robinson (Golders Green), Joseph Willcock (Southampton), G Stillingfleet Johnson (Seaford), R C Durell (South Woodford), H W Satow (Bangor), E J Gibbs (East Ham), H Cockell (Penge), H B (St. Leonards-on-Sea), and Mark Dawson (Horsforth).

CHESS IN ENGLAND.

Game played at Hastings in the Major Victory Tournament of the British Chess Federation, between Messrs. V L WAHLTUCH and W. WINTER, and awarded the special prize for the best game played by a British competitor.

(Queen's Pawn Game.)

WHITE	BLACK
(Mr. Wahltuch.)	(Mr. Winter.)
1. P to Q 4th	P to Q 4th
2. P to Q B 4th	P to K 3rd
3. Kt to Q B 3rd	Kt to K B 3rd
4. B to Kt 5th	Q Kt to Q 2nd
5. P to K 3rd	B to K 2nd
6. Kt to B 3rd	Castles
7. B to Q 3rd	P to Q Kt 3rd
8. P takes P	P takes P
9. Castles	B to Kt 2nd
10. R to B sq	R to K sq

So far the moves are the same—in a slightly different order—as those of the great game between Pillsbury and Tarrash in the previous Hastings Tournament. Now Black makes a departure, but whether for the better in view of his later play is a matter of doubt.

11. B takes Kt Kt takes B

Looking at the fact that a strong King's side attack is being developed by White, it is worth consideration whether B takes B is not safer, reserving

With this reply White scores a

masterly victory. His clean, correct and forcible style of play well deserved the honour bestowed upon it by the adjudicators.

12. R to R 3rd	P to Kt 3rd
13. Kt takes Kt	P takes Kt
14. B to B 4th	R to K B sq
18. Q to Kt 3rd	P to Q Kt 4th
19. B takes P (ch)	K to Kt 2nd
20. Q to K 6th	

21. Q to Kt 4th Resigns.

The Lords Commissioners of the Admiralty have granted 200 guineas to the funds of the training-ships *Arethusa* and *Chichester*, from the proceeds of exhibitions of "mystery" ships and German submarines. The Committee welcome this acceptable help, especially as it may be taken to show that the Admiralty values the work that has been done on these two training-ships. It should be an incentive, too, to the British public generally to continue to help in the maintenance of these useful ships for poor boys of good character. If any of our readers desire to send a donation, the address is 154, Shaftesbury Avenue, W.C.2.

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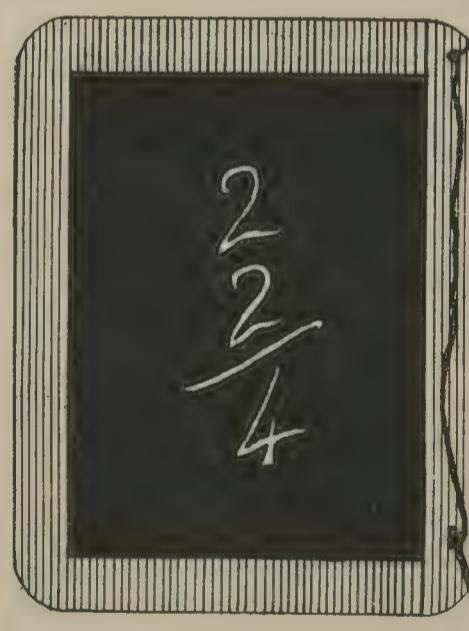
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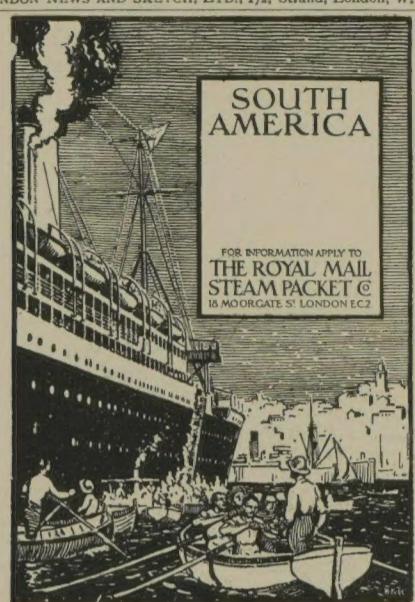
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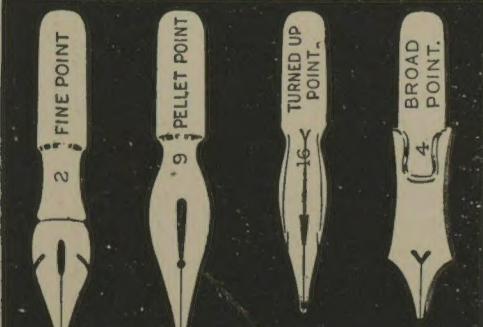
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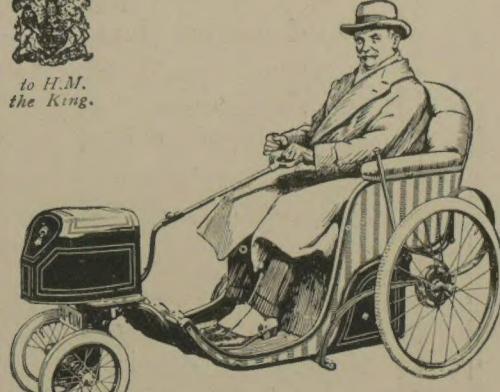
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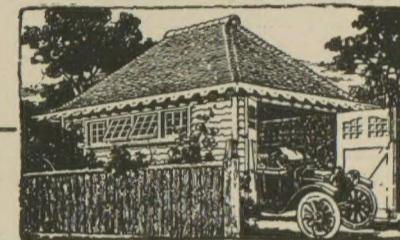
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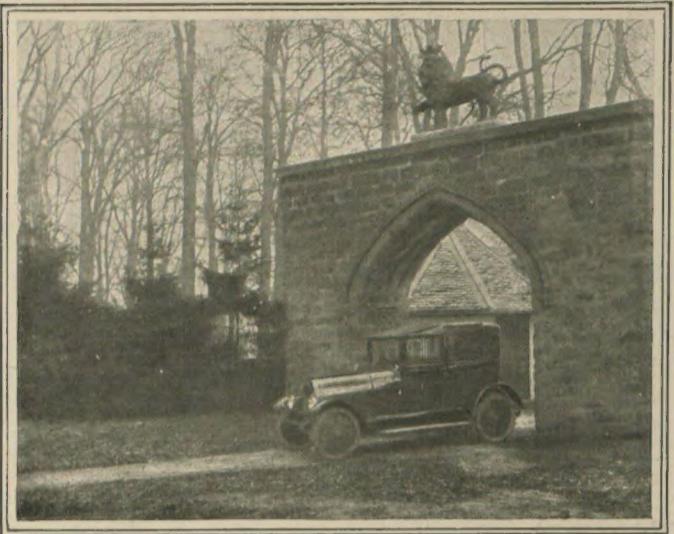
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THE CHRONICLE OF THE CAR.

Air- v. Water- Cooling. A great deal of prominence has been given lately to the real or supposed virtues of air-cooling for car-engines.

The war has taught the engine-designer a lot about air-cooling, and there is no doubt much progress has been made as the result of experience with air-cooled aero-



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engines. It must be pointed out, however, that the conditions under which the aeroplane motor works are quite dissimilar from those existing in the case of the car, and it does not at all follow that what will give excellent results in the one case will do equally well in the other. Also, it must not be forgotten that the most successful aero-engines were, after all, water-cooled. It may be readily agreed that, providing air-cooled engines can be so designed as to retain their efficiency in the hands of the private owner—and that is where the shoe pinches—there is very much to be said for the principle involved. The air-cooled engine is lighter and much less expensive in manufacturing costs. Its use does away with the necessity for a more or less complicated system of cooling. There is no need for radiators and the pump and water connections, which, while they usually give very little trouble, nevertheless require a certain amount of attention.

On the other hand, there are problems connected with air-cooling which have not even yet been solved

satisfactorily, so far as my own knowledge goes. I am quite aware that a recent trial of a car fitted with an air-cooled engine was very successful indeed, and showed quite a good performance as regards both fuel and oil consumption. But the car was driven by one of the most expert competition drivers in the country, and, therefore, the test must not be taken too seriously. I congratulate the makers and the driver; but I should very much like to see what the same car would do, after six months of average running, driven by an amateur of average driving ability. My experience of air-cooled motors is that they require infinitely more attention to keep in tune than the water-cooled type. They are more expensive in oil-consumption, and, as a rule, do not under the best conditions give the same power output for their dimensions. Air-cooling is old in America, but it is significant that it has met with very little success. I recollect when there were several air-cooled cars made in the United States, but they have all, with the single exception of the Franklin, disappeared. True, the designer knows more about first principles than he did then; but it is nevertheless significant that the American constructor has not thought it worth while to pursue a subject which seemed to promise good results.

It may be that I am prejudiced, but I cannot forget the experiences of the early days of motoring, when air-cooling was well thought of by more than one of the leading constructors. Take Lanchester, as an example. I am perfectly confident that if Mr. Lanchester were asked to design an air-cooled car to-day he would shudder at the thought—and he knows a lot about the principle, which he learnt in the hard school of experience. In any case, I am not inclined to think that air-cooling will make a great deal of progress here until a long course of public demonstrations has shown it to be satisfactory from all points of view. That, I think, will be difficult to accomplish.

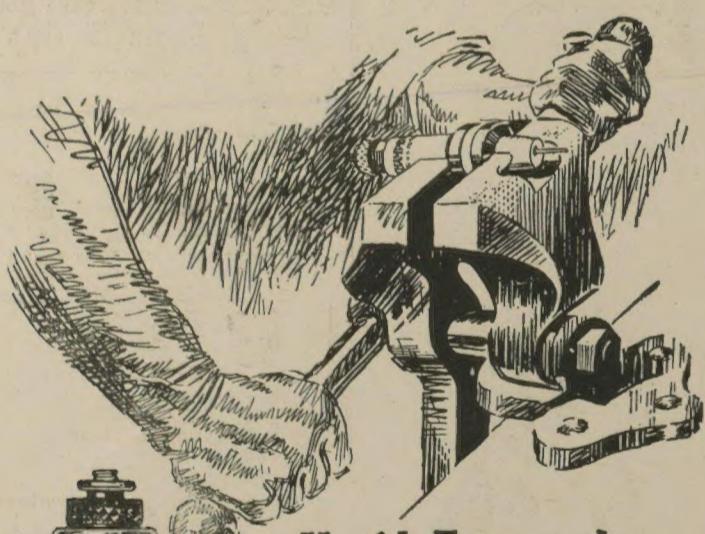
Willys-Overland in England.

The latest and most significant development in British motor-car manufacture is the new British-American Company, Willys Overland Crossleys, Ltd. Arrangements between Willys-Overland, Ltd., of Toledo, Ohio, U.S.A., and Crossley Motors, Ltd., of Gorton, Manchester, have been definitely completed. The new company has acquired the Heaton Chapel staff and factory of Crossley Motors, Ltd., and will manufacture all-British Overlands, using British labour and British materials throughout. Willys Overland Crossley, Ltd., will make "Overland Four" cars first for British, and later for Overseas markets. It should prove of considerable benefit to labour conditions and industrial production in this country. The majority of the company's shareholders are British. Mr. John N. Willys, President of the Willys-Overland Company of Toledo, Ohio, U.S.A., is its President. Its directors are:—Chairman, Sir Kenneth Crossley, Bart. (Chairman, Crossley Motors, Ltd.); Mr. Edwin B. Jackson (Vice-President, Willys-Overland Company, Toledo, Ohio, U.S.A.); Mr. William M. Letts, C.B.E. (Managing Director, Crossley Motors, Ltd.); Mr. Frank Wyman Libby (Chairman and Managing Director, Willys-Overland, Ltd., London). The authorised capital is £2,000,000. Crossley



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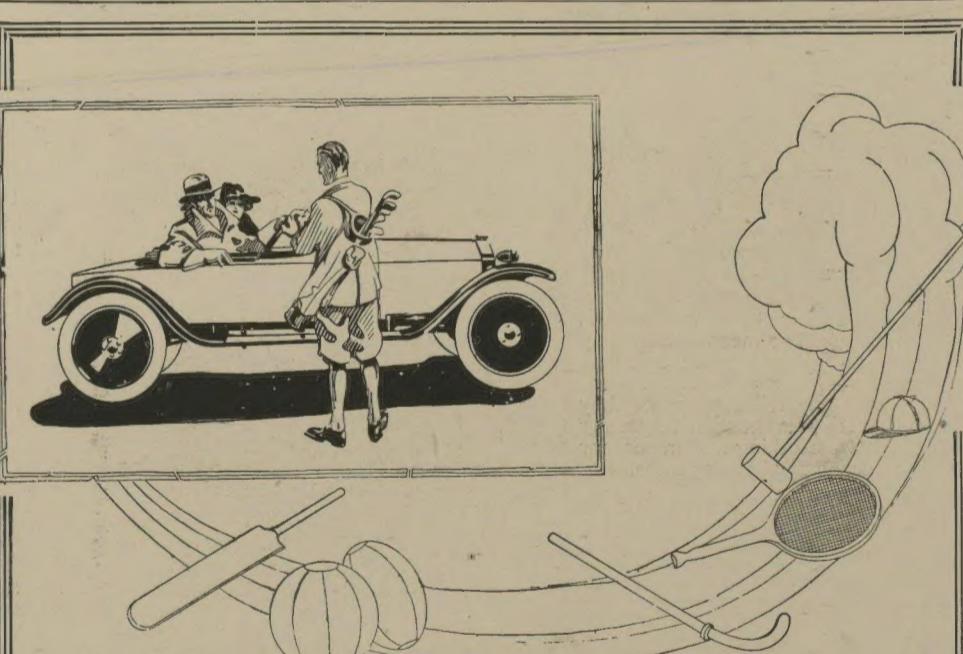
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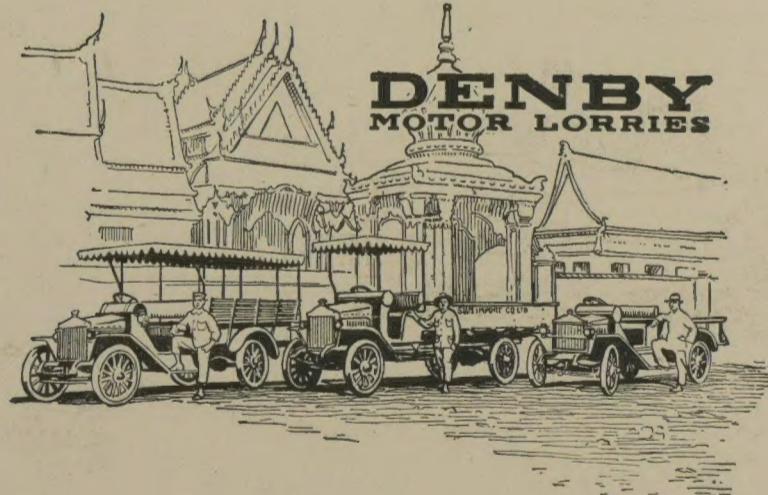
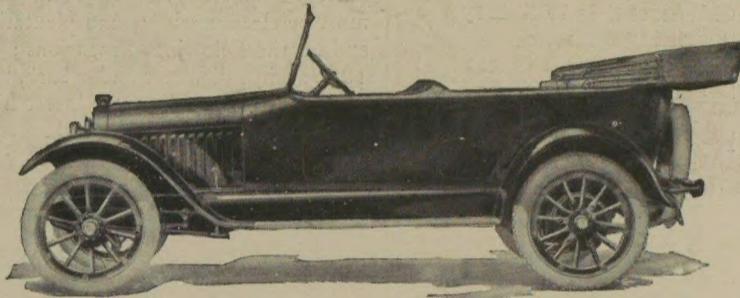
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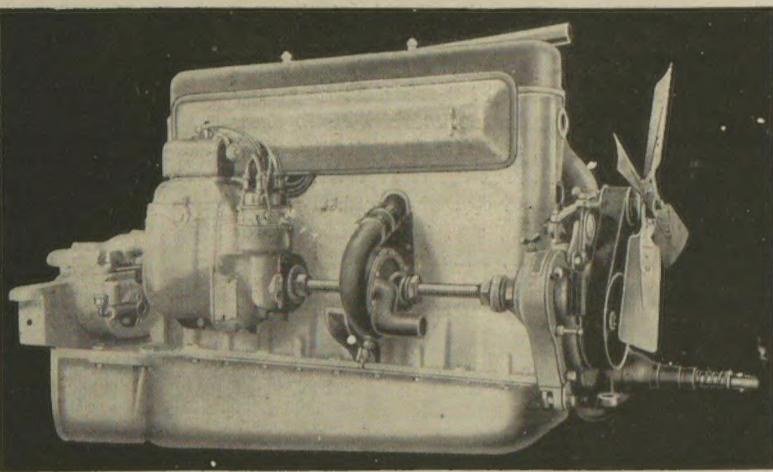
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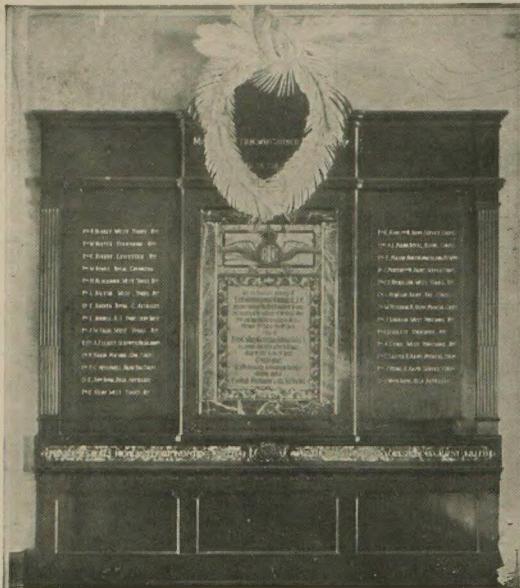
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THE PLAYHOUSES.

"THE SORCERER." AT THE PRINCE'S.

HERE are two points of view from which a revival of "The Sorcerer" is specially interesting—and interesting to two different classes of the public. First of all, there is its historical interest for connoisseurs or for playgoers who know by heart the Gilbert and Sullivan series. Here, such will say, we can see the start of a delightful artistic convention. The plan is not quite complete on either its literary or its musical side. Save in the treatment of the Vicar and the droll John Wellington Wells, neither Gilbert's fancy nor his humour has fully gained that spontaneity and that impetus which he was so soon to attain for each of them. And in Sullivan's score again we notice a certain dependence on grand opera effects from which before long he felt able to break away—thus in his use of recitative; but, on the other hand, the song about the curate, the duet between Lady Sangazure and her aristocratic counterpart, and the exquisite quintet already give more than promise of that stream of melody and that scholarly accomplishment which were to show that English music, after all, still possessed vitality. But there is another attraction about "The Sorcerer." Less often staged than other old Savoy operas, and, therefore, less traditionally familiar than, say, "The Mikado" or "The Gondoliers," it possesses, alike in its story and in its airs, a freshness of which repetition has robbed its



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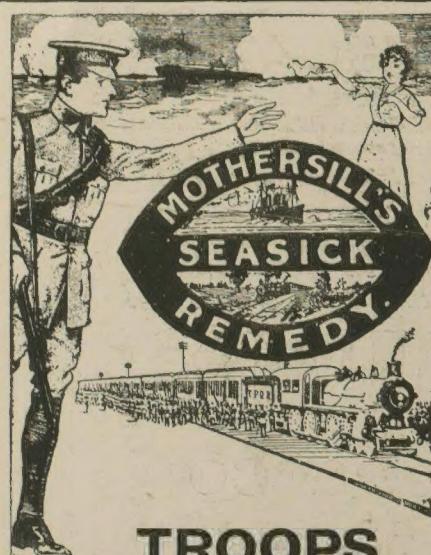
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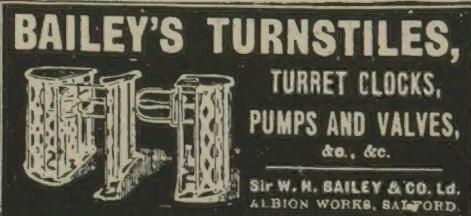
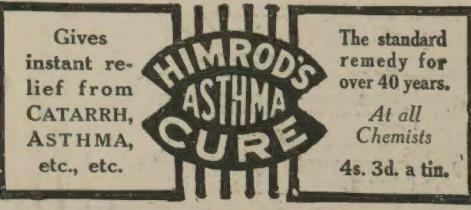
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successors. Both types of patron, therefore, have found pleasure in the revival, especially as the company at the Prince's is equally at home in this earlier as in the later products of the famous collaboration. Three performances stand out as full of *vis comica*—Mr. Leo Sheffield's Vicar, Mr. Lytton's Sorcerer, and the Lady Sangazure of Miss Bertha Lewis; but there is good work also done by Mr. Gordon Cleather, Miss Nellie Briercliffe, Miss Helen Gilliland, and Mr. Derek Oldham; and the choral singing must not be left unnoticed.

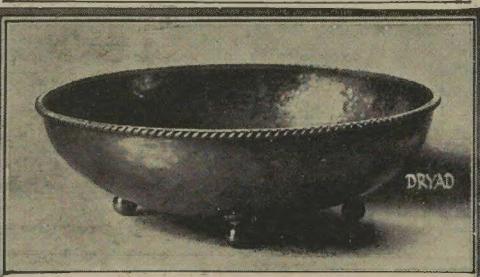
"HIS HAPPY HOME." AT THE COMEDY.

Mr. Ben Webster had a busy day on Monday, for besides sharing the first-night honours of "Mr. Pim," he appeared in the afternoon at the Comedy in a farce written by H. V. Willoughby and entitled "His Happy Home." Mr. Webster played with refreshing humour and breadth of style the part of a Persian poet, bland, dignified romantic-looking but amorous, who, with no intention to harm his English friends, gets them all, including a publisher, into the most distressing tangle of complications. As droll a figure as even the poet is the bewildered little publisher, whose shock at finding his innocence involved is most quaintly, just because quietly, pictured by Mr. David Miller. The author acknowledges a certain indebtedness to M. Froyez; if his is an adaptation, perhaps so is explained, owing to the necessities of dilution, the lack of sparkle in the first act. None the less, it is quite a merry entertainment for winter afternoons.

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